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## HERNIA AND WORKMEN'S COMPENSATION.

**MICHIGAN SUPREME COURT DECIDES THAT AN EMPLOYEE WHO SUFFERED FROM A HERNIA WAS ENTITLED TO COMPENSATION.**

The Supreme Court of Michigan has reaffirmed a previous decision<sup>1</sup> that occupational diseases are not included within the terms of the Michigan workmen's compensation law, but the court has also decided that an employee who suffered from hernia, which was discovered shortly after severe muscular exertion and strain, was entitled to compensation, on the ground that the hernia was the result of an "accidental injury."

The essential parts of the opinion are published in this issue of the Public Health Reports, page 2375.

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## PREVALENCE OF POLIOMYELITIS (INFANTILE PARALYSIS).

The undue prevalence of poliomyelitis (infantile paralysis) seems to be still limited for the most part to New York City and communities in the vicinity. The disease has not spread much in epidemic form. Many States have actually reported this year fewer cases than during the corresponding period of 1915. A list has been made of the cities which have reported five or more cases of the disease during any one week this year. The number of cases reported in the cities is shown. The 122 cases reported in Chicago is relatively a small number considering the population of the city. The 78 cases reported in Toledo seem to be the greatest number in proportion to the population occurring at a distance from New York City.

If any inference may be drawn from the number of cases being reported from week to week, it would be that the prevalence of the disease has begun to diminish.

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<sup>1</sup> Public Health Reports Reprint 342, p. 82.

*Poliomyelitis (infantile paralysis) in cities in which five or more cases have been reported in one week.*

City.	Period covered.	Number of cases reported.
Atlantic City, N. J.	July 12 to Aug. 26.	14
Baltimore, Md.	July 2 to Aug. 26.	23
Bayonne, N. J.	June 25 to Aug. 26.	37
Birmingham, Ala.	July 2 to Aug. 12.	12
Boston, Mass.	July 2 to Aug. 19.	24
Bridgeport, Conn.	July 16 to Aug. 26.	24
Camden, N. J.	July 23 to Aug. 26.	37
Chicago, Ill.	June 18 to Aug. 26.	122
Cincinnati, Ohio	July 9 to Aug. 26.	16
Detroit, Mich.	do.	17
East Orange, N. J.	July 16 to Aug. 26.	31
Flint, Mich.	July 23 to Aug. 26.	19
Harrison, N. J.	July 9 to Aug. 26.	28
Haverhill, Mass.	July 2 to Aug. 26.	7
Jersey City, N. J.	do.	126
Kearny, N. J.	July 9 to Aug. 26.	26
Memphis, Tenn.	Aug. 6 to Aug. 12.	6
Minneapolis, Minn.	July 30 to Aug. 26.	42
Montclair, N. J.	July 16 to Aug. 26.	13
Newark, N. J.	June 18 to Aug. 19.	955
New York, N. Y.	June 4 to Aug. 26.	7,337
Northampton, Mass.	July 30 to Aug. 26.	8
Orange, N. J.	July 9 to Aug. 19.	47
Perth Amboy, N. J.	July 2 to Aug. 26.	24
Philadelphia, Pa.	June 25 to Aug. 26.	383
Pittsburgh, Pa.	July 2 to Aug. 26.	16
Pittsfield, Mass.	July 9 to Aug. 26.	12
Plainfield, N. J.	July 16 to Aug. 26.	23
St. Louis, Mo.	June 11 to Aug. 26.	10
St. Paul, Minn.	July 2 to Aug. 26.	40
Somerville, Mass.	July 23 to Aug. 26.	8
Springfield, Mass.	do.	11
Stamford, Conn.	July 30 to Aug. 5.	8
Syracuse, N. Y.	July 30 to Aug. 26.	43
Toledo, Ohio.	June 18 to Aug. 26.	78
Trenton, N. J.	July 9 to Aug. 26.	26
Washington, D. C.	July 9 to Aug. 19.	17
West Hoboken, N. J.	July 2 to Aug. 26.	34

**POLIOMYELITIS (INFANTILE PARALYSIS.)****ITS INTERSTATE AND INTRASTATE CONTROL.**

The Conference of State and Territorial Health Authorities with the United States Public Health Service convened for the consideration of the prevention of the spread of poliomyelitis, at Washington, D. C., August 17 and 18, 1916, adopted the following committee report:

**Report of the Committee on Measures for the Prevention of Interstate and Intra-state Spread of Poliomyelitis.**

I. It is the sense of this committee that the first step proper to be taken by a State health authority, believing its territory to be in danger of an invasion by poliomyelitis from another State or part of a State, is to call the attention of the United States Public Health Service to the situation believed to be dangerous, and to request the United States Public Health Service to take whatever steps are necessary to prevent the interstate spread of poliomyelitis.

II. The necessary steps ordinarily to be taken by the United States Public Health Service in such a contingency are believed to be:

(1) Investigation of the infected area.

(2) Notification concerning the removal of persons 16 years of age or under from an infected area to a named point of destination in another State, said notification to be addressed in every case to the State health authority of the State of destination.

(3) The forms of notification and of health certification and of permits to travel should include the following information and specifications with such additional information and specifications as the United States Public Health Service deems necessary:

Identification of each traveler, the exact location of present or usual residence, and record of premises as to freedom from poliomyelitis during the preceding three months; or as to latest date of infection if less than three months; or as to renovation or cleansing of premises after infection.

(4) Permits to travel shall be void unless the journey shall begin within 24 hours after issue of the permit.

(5) Single permits shall not be issued for several persons, except for family or household groups coming from the same domicile.

(6) The collection of fees, by health officials, from applicants for permits, whether resident or nonresident, should not be permitted.

(7) The certificates of private physicians will not alone be a sufficient basis for the issue of a permit to travel. Permits for interstate travel will be based on medical inspection.

(8) Permits for interstate travel should be signed by an officer of the United States Public Health Service, or by the State health officer, or by an officer authorized by the State health authority.

III. The committee disapproves quarantine by one State against another State or quarantine by one community against another community in the same State. It is believed that the Federal Government, through the United States Public Health Service, can perform all the duties of notification and certification required in interstate relations in case of unusual prevalence of poliomyelitis, and that State health authorities can and should perform like services as between communities in the same State during unusual prevalence of poliomyelitis.

IV. It is recommended that all cases of poliomyelitis should be reported immediately to the local health authorities and to the State health authorities, and that State health authorities make weekly reports to the United States Public Health Service of all cases of poliomyelitis. The United States Public Health Service is asked to furnish general reports weekly.

V. It is recommended that all persons 16 years old or under, with a clean bill of health, and removing from an infected area or district to another locality, should be kept under medical observation daily for two weeks from the date of the certificate.

VI. It is believed that the period of isolation of a case of poliomyelitis should be not less than six weeks from date of onset.

VII. The isolation of cases of poliomyelitis should be stringent isolation of the sick person with attendant or attendants, in a properly screened room or rooms, with disinfection at the bedside of all bodily excretions. Wherever it is possible, the removal of patients to a hospital is greatly to be preferred to isolation in a private house or apartment.

VIII. In case of death from poliomyelitis the funeral should be strictly private.

IX. Wherever poliomyelitis is unusually prevalent, assemblages of children in public places should be prohibited.

X. During unusual prevalence of poliomyelitis, schools should not be opened without thorough medical supervision by a health authority. When schools are opened, beginning should be made with high schools, and proceeding to lower age groups no more rapidly than complete medical examinations can be made.

XI. Because of the existence of unknown carriers of the infectious virus of poliomyelitis, and because the infectious virus is present in the body discharges of such persons, therefore all measures to prevent contamination by human excreta or other bodily discharges, the suppression of the fly nuisance, prohibition of the common drinking cup, and a general educational campaign for cleanliness and sanitation, with particular instruction of parents and children concerning personal hygiene, especially of the mouth and nose, are strongly urged by the committee.

XII. To aid in preventing the spread of poliomyelitis, common carriers should instruct their agents and ticket sellers by direct order, as well as by public notices, when poliomyelitis is unusually prevalent, that travelers with children of 16 years or under must be provided with a health certificate, as detailed in another section of this report. Common carriers are to be notified of the area and prevalence of the infection and at what points certificates must be displayed before permitting the travel of children of 16 years of age or under.

XIII. The epidemic prevalence of poliomyelitis in certain States at this time indicates a probability of epidemic prevalence next year in States not gravely affected at the present time. It is believed that the measures here recommended should be continued in operation at least until such time as the incidence of the disease has subsided to or below its usual level.

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T. D. TUTTLE,  
H. M. BRACKEN,  
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## ANOPHELES INFECTIVITY EXPERIMENTS.

### AN ATTEMPT TO DETERMINE THE NUMBER OF PERSONS ONE MOSQUITO CAN INFECT WITH MALARIA.

By M. BRUIN MITZMAIN, Technical Assistant, United States Public Health Service.

The habits of a blood-sucking insect often give the investigator a clue to its relations in the part played by it in the economy of man. A mosquito which, ticklike, satisfies its food demands by a prolonged, uninterrupted aspiration of blood and resumes its normal function as regards procreation without a second blood meal, does not play a rôle which need attract the attention of the sanitarian. Opposed to this form, however, a mosquito like the plasmodia-bearing *Anopheles* shows its evil possibilities at the outset by its insatiable food requirements. It may demand three complete meals of blood before providing for one of several egg layings. It may be in the habit of taking a short meal and, interrupting itself automatically, leave one host in order to rest or to attack another host. Although it has been found that an anopheline mosquito may survive for a period of 67 days without partaking of blood, a typical member of the genus requires a blood meal approximately every three days in order to thrive and perpetuate its kind. When a full meal is not taken, due to an interruption on the part of mosquito or host, it is necessary to consummate its purpose in a further attack on the same or a different host. In this way the anopheline mosquito becomes an important factor from the point of view of disease transmission. Bearing this in mind, the sanitarian must then determine to what extent a mosquito which has already contaminated its gustatory parts in biting a malaria-diseased human being becomes a menace to the public health.

The whole question of the importance of the mosquito as a vector of malaria resolves itself into a consideration of numerical potentialities. How many mosquitoes succeed in obtaining a blood meal, and of these what percentage succeeds in developing the malarial cycle? Ronald Ross estimates that only 1 out of 24 anophelines manages to bite a human being, and this proportion is greatly reduced, economically measured, because less than 25 per cent succeed in the rôle of carriers. Roughly considered, then, we may look upon 1 out of every 100 female anophelines in a malarious country as a possible infecting agent. This one mosquito, regarded as a health disturber, must be evaluated in terms of certain biologic factors in order to appreciate the potency and extent of its parasitism in the conveyance of malaria.

As a result of feeding tests the writer desires to emphasize the individuality of the insect carrier. The virility of one or a few individuals in the relationship to malarial conveyance is here demonstrated and leads one to infer that the power of an infected *Anopheles*

to harbor the fever organisms probably remains until the time when it is no longer able to bite. This length of time, the longevity of infection, is considerable and probably has not been fully determined. In the present experiments the maximum has been found to be a period of 25 days.

If it can be established that a malarial mosquito once infected remains so, it would appear an added contribution to our knowledge to at least approximate the extent of this infectivity. Is every bite an infective one, and how many persons in a community can be infected by the same mosquito? A partial solution of these problems is attempted in this series of experiments. Here 14 cases of malarial fever resulted from the bites of infected mosquitoes. In 11 of these successful transmission resulted from mosquito biting which was purposely interrupted in order to induce the insects to bite as many persons as was practicable. Applying the mosquitoes so that one person after another was bitten in rapid succession (or at short intervals), it was indicated that in 9 of these experiments successful conveyance of malaria resulted.

It has been demonstrated heretofore, and confirmed by the writer, that the bite of a single *Anopheles* can cause malarial fever, and it would appear of sanitary significance to determine if an *Anopheles* can convey infection repeatedly without again obtaining blood from the original source of infection. This successive infectibility would have a practical bearing in community sanitation, indicating the necessity for intensive elimination of mosquitoes. In the case of an *Anopheles* which does not travel far, preferring to rest and obtain its food in buildings frequented by people, the importance of local infectibility is obvious.

*Anopheles punctipennis* Say, the species here considered, though not found commonly in residences, is of frequent occurrence in locations equally favorable for infection, such as privies. Epidemiologically, school privies and similar places offer potentialities in this regard which the sanitarian can not afford to underestimate.

Castellani and Chalmers<sup>1</sup> (1913) consider the infection of several persons by a single mosquito as probable. They state: "The anopheline not merely carries the germ but because of its length of life a single individual may be capable of infecting several human beings; for it must be remembered that there is no proof that the mosquito is in any way deleteriously affected by the malarial parasite."

Stephens<sup>2</sup> (1911) considers the question of how many persons one anopheline can infect as one of the problems in the infection of mos-

<sup>1</sup> Castellani and Chalmers (1913), *Manual of Tropical Medicine*, second edition. Wm. Wood & Co., New York.

<sup>2</sup> Stephens, J. W. W. (May, 1911), *Methods for detecting sporozoites and zygotes in mosquitoes infected with malaria*. *Bulletin of Entomological Research*, vol. 2, p. 7.

quitoes which need further investigation. He states that we have no data on this point.

In discussing the mode by which sporozoites are introduced into the blood of man and the subsequent fate of the malarial parasite, Braun<sup>1</sup> (1908) writes:

If a small number only happen to be present in the salivary glands of the mosquito, they are all discharged with its first bite; in other cases only a few are gotten rid of, so that under these circumstances one single *Anopheles* is capable of infecting several persons.

Ross<sup>2</sup> (1910), discussing the proportion of mosquitoes which succeed in biting human beings, states that in the huts of poor natives, and the badly managed barracks and hospitals where many unprotected people sleep in the same room, a single mosquito may often be able to bite several persons during one night. In such houses the chances of infection must be enormously increased, and the practice of congregate sleeping must be one of the principal causes of the diffusion of malaria.

The work here described was conducted in the course of malarial investigations under the charge of Surg. R. H. von Ezdorf, United States Public Health Service, and the findings and the care of the cases had his supervision and confirmation.

In an effort to ascertain the infectibility of *Anopheles punctipennis*, several volunteers were bitten successively by a series of three mosquitoes, which had been applied 10 days or more previously to an uncomplicated case of benign tertian malaria.

An untreated patient suffering from tertian malarial fever volunteered for the purpose of furnishing the parasites required in this experiment. During the interval of awaiting gametocyte development (January 17 to February 6, 1916), several generations of complete schizogony were observed to occur in the patient's blood. However, sporogony was unduly inhibited up to January 29, too few gametocytes being present to warrant infectivity of the insect hosts. Finally, sufficient numbers of sexual forms matured during the period from January 29 to February 6, at the termination of which period (February 6 and 7) mosquitoes were applied to the patient.

The paucity of sexual parasites in the blood of the donor may be appreciated from the counts made in a thick film and a thin film prepared February 7. In the two preparations 1,231 leucocytes were counted and the matured gametocytes encountered numbered two, an average of one gametocyte to 616 leucocytes. In addition to these there were observed, in the two blood specimens, 48 half-grown gametocytes and five ranging in size from three-fourths to nearly full

<sup>1</sup> Braun, Max (1908), *The Animal Parasites of Man*, third edition, p. 100. Wood & Co., New York.

<sup>2</sup> Ronald Ross (1910), *The Prevention of Malaria*, p. 169. John Murray, London.

grown forms. At the time of these examinations the patient had been started on a course of quinine treatment.

It was planned to have only one of the experimental mosquitoes bite several persons, but unfortunately it appeared that not any one of the four specimens available was vigorous enough to survive the full length of the experiment. On this account it was feared that biting the first volunteer and waiting the usual two weeks of incubation would not provide for sufficient longevity to complete the series of successive feedings. In applying the mosquitoes it was aimed to give a practical bearing to the investigation by both the "complete" and "interrupted" methods of feeding, in order to find if it were possible that the same mosquitoes could infect within the same day and during an interval of a few hours at most. This has its significance in the infecting of a group of people either assembled or as individuals visiting the same public places at short intervals.

Among the persons who volunteered for the experimental inoculations are included five physicians to whom the writer is indebted also for their clinical histories. The general interest and personal sacrifice of these persons made feasible the scope of this investigation.

It was aimed at first to apply the four specimens in parallel series to as many persons as would volunteer, but it was found that the mosquitoes were too feeble to warrant this division. Therefore as many of the four as could be induced to bite were used for each person after the preliminary feeding. On February 17 one of the specimens died (No. 18), and not more than two of the remaining specimens could be induced to bite the different volunteers. In some instances the mosquitoes when applied were interrupted in their biting after a few seconds; in other instances they were given opportunity to feed to repletion.

*Control of persons volunteering.*—Although ideal conditions governing control of the persons employed in the experiments were not secured, the following circumstances indicate practical elimination from accidental or external infections. All persons involved were examined previously—the blood smears in all cases were negative for parasites. The experiments were conducted out of the malarial season for this locality. During this period there was not an instance of a report of clinical symptoms in any person on the hospital reservation not employed for these tests.

The following table enumerates the persons bitten, the length of time mosquitoes were applied, and the resulting incubation period in the positive cases:

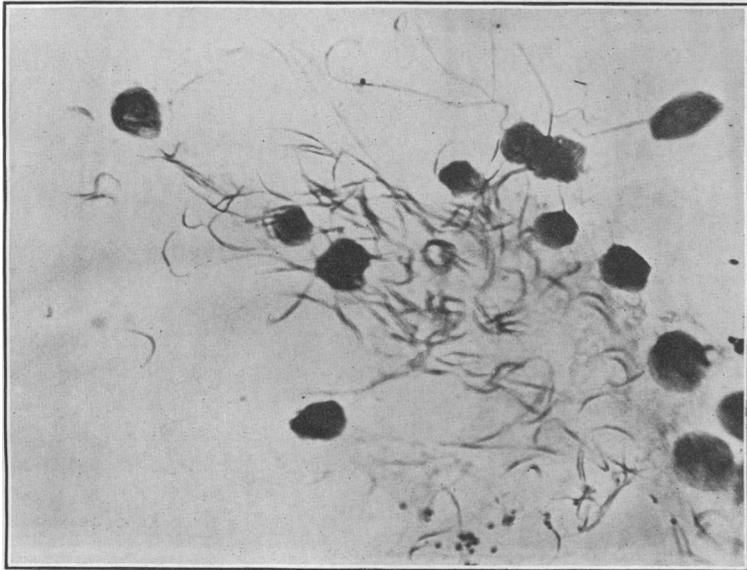
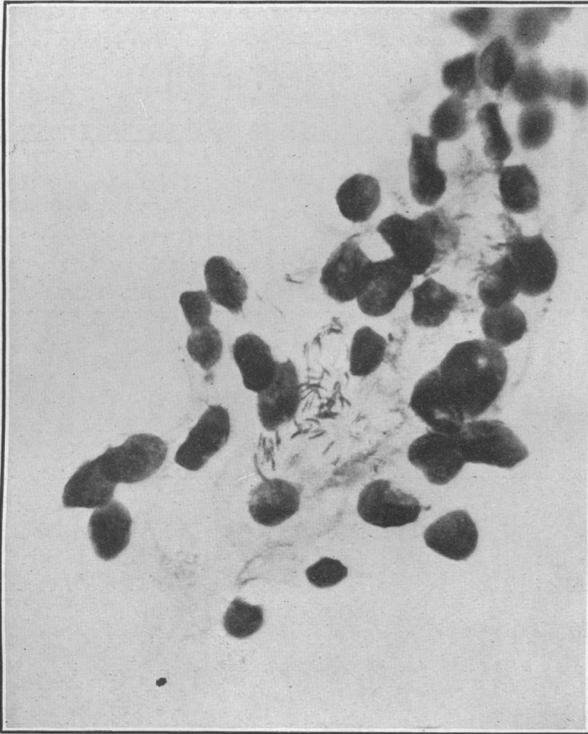


FIG. 1.—SPOROZOITES FROM A CRUSHED LOBE OF THE SALIVARY GLANDS OF MOSQUITO NO. 23 AFTER IT HAD BITTEN 12 PERSONS.



FIG. 2.—SAME AS FIG. 1, ENLARGED.



APPEARANCE OF THE STAINED SPOROZOITES WITHIN  
THE SALIVARY GLANDS OF MOSQUITO NO. 24.

*Length of time each person was bitten and incubation period resulting.*

Date bitten.	Volunteer.	Infected <i>A. punctipennis</i> applied.				Incubation period (days).
		No. 18.	No. 23.	No. 24.	No. 25.	
1916.						
Feb. 17	H. E. H.....	1 minute.....	45 seconds.....	45 seconds.....	40 seconds.....	15
18	Dr. H. A. T.....	.....	Complete.....	Complete.....	.....	14
21	Dr. R. C. D.....	.....	.....	.....	1 minute.....	13
21	Dr. T. H. D. G.....	.....	.....	30 seconds.....	40 seconds.....	14
21	F. M. H.....	.....	.....	1 minute.....	45 seconds.....	14
21	R. E. T.....	.....	.....	30 seconds.....	40 seconds.....	15
22	Dr. R. T. O'N.....	.....	.....	1 minute.....	.....	15
23	H. T.....	.....	40 seconds.....	1 minute.....	.....	13
23	Dr. S. L. C.....	.....	40 seconds.....	30 seconds.....	.....	13
26	F. W.....	.....	50 seconds.....	.....	.....	16
26	F. A.....	.....	1 minute.....	1 minute.....	.....	14
28	C. B.....	.....	Complete.....	Complete.....	.....	13
Mar. 1	T. A. R.....	.....	35 seconds.....	.....	.....	19
1	G. O.....	.....	1 minute.....	.....	.....	18
2	J. M.....	.....	50 seconds.....	.....	.....	Neg.
2	J. W.....	.....	1 minute.....	.....	.....	Neg.
3	W. P.....	.....	20 seconds.....	.....	.....	Neg.

In every instance in which two mosquitoes succeeded in transmitting infection, at least one of the pair was proved to be capable of causing the disease when used singly, namely, Nos. 24 and 25 in four cases; Nos. 23 and 24 in five cases.

No. 24 was proved to be the sole infective agent in one experiment. No. 23 was proved to be the sole infective agent in three experiments.

The degree of parasitism in the four mosquitoes used in the inoculations is described in a previous report and is given as follows:

*No. 18.*—Dissected February 19. Incubation 12 days. The structures of the midgut were fairly obscured by the projecting mass of oocysts. Twenty-eight of these bodies were counted; seven were observed to contain sporoblasts, while the majority of the remainder contained varying numbers of spindle organisms in different stages of development. Several of these bodies ruptured upon slight pressure, when swarms of relatively small sporozoites floated away from the ripe oocysts. The salivary glands in this specimen were heavily parasitized. Five of the lobes appeared granular with matted clusters of typical curved organisms. Numerous sporozoites were seen moving sluggishly through the saline medium.

*No. 23.*—Dissected March 3. Incubation period 25 days. This specimen had been given a feeding of human blood five hours previously, consequently the alimentary tract was found engorged with blood. No oocysts or shrunken capsules were seen. Several sporozoites were seen moving freely in the solution surrounding the dissected stomach. The salivary glands were greatly hypertrophied; those lobes which in the dissection were torn loose with the head were parasitized with a moderate number of sporozoites, and a remaining single lobe afterwards removed from the thoracic cavity was seen to be much shrunken in size, its degenerated cells containing only a few sporozoites. A large number of these organisms were observed free and very active in some material dissected from the thorax.

*No. 24.*—Dissected March 1. Incubation period 24 days. The midgut was seen with four oocystic capsules, three much shrunken, narrowed to probably one-half the width. One appeared normal in size, only slightly shrunken, containing three non-motile sporozoite-like bodies. The dissected salivary glands were not removed cleanly either from the head or thorax. A small portion was attached to the head and two

lobes of the glands were seen in material crushed from the thorax. On pressure, numerous very active sporozoites were observed. The gland structure was granular, but no organisms were perceived in the cells on account of the presence of the mat of overlying fungous threads.

No. 25.—Dissected February 23. Incubation period, 16 days. The stomach of this specimen was not seen on account of the superimposed tangle of mycelium threads of some fungous parasite which probably caused the insect's death. When the gut wall was punged a few sluggishly motile sporozoites were observed. These originated probably from a gut oocyst. Only small disjointed portions of the salivary glands were examined. These appeared heavily parasitized with more or less active sporozoites possessing the typical large refractile nucleus and sharply curved ends.

The following protocol accounts for the results of mosquito biting in the various volunteers, presenting the clinical histories and the degree of parasitism involved.

H. E. H.—Previous history of malaria: Negative.

February 17, 1916. Bitten by mosquitoes Nos. 18, 23, 24, and 25.

March 2. First distinct clinical symptoms of malaria observed in H. E. H. Severe headache for past three days. Slight chill with pain in joints and chest. No parasites seen. Temperature, p. m. 39° C.

March 3. Temperature, a. m. 37.4° C.; slight chills with increasing temperature to 38.8° C. Pains general, vertigo and lassitude. Parasites in finger prick blood: A few half grown rings; several ameboid forms and one exhibiting Schuffners granules; organisms distinctively *P. vivax*. Given 30 grains quinine bisulphate.

March 4. During night, fever and sweat. Temperature normal in the morning, showing effects of having taken 40 grains quinine bisulphate.

Dr. H. A. T.—Previous history of malaria: Suffered with tertian malaria in 1912. Recovered by quinine medication.

February 18, 1916. Bitten by mosquitoes Nos. 23 and 24.

March 2. Complains of severe headache and eye strain; general lassitude. Temperature normal.

March 4. Premonitory symptoms all morning. Parasites seen prior to chill. Scarce and very small rings in blood. One large distinct *vivax* and several small ameboid rings seen. Severe chills at 4.30 p. m.; previously, temperature at 10 a. m., 37.6°, rising to 38.6°, then 39° just one hour previous to chill.

March 4. Temperature during last night rose to 40° C.; febrile paroxysm severe. Morning temperature, 37.8° C. Parasites few; large ameboid parasites—very characteristic pure tertian.

March 5. Temperature, 39.° C. Quinine taken.

Dr. R. C. D.—Tertian malaria in 1907; recovered.

February 21, 1916. Bitten by mosquitoes No. 24 and 25; pronounced local reaction at site of each bite.

March 2. Languor, slight headache, and muscular pains. Blood examination negative.

March 3. Headache and malaise. Blood examination negative.

March 4. Chilly sensation beginning at noon; severe chill and headache at 7 p. m.

March 5. Chilly sensation at noon, severe headache and muscular aching. Young ring forms of parasites found in smears. Commenced quinine treatment.

March 6. Chill at 11 a. m. Few large rings of *P. vivax*.

March 7. Headache and muscular soreness throughout day.

March 8. No notable symptoms.

March 9. No notable symptoms.

*Dr. T. H. D. G.*—Previous history of malaria: Estivo-autumnal attacks in September, 1915, cured with quinine.

February 21, 1916. Bitten by mosquitoes Nos. 24 and 25.

March 4 to 6. Nervousness without other symptoms.

March 6, a. m. Slight headache and aching joints, ringing of ears; general lassitude. Temperature, 8.15 p. m., 38.9° C. Acute joint pains, headache, slight dizziness, feet burning. Blood examination at 9 p. m. (thin smear); observed three very distinct large young rings. Quinine begun 10 p. m.

May 19. Relapse. Clinical symptoms and *P. vivax* in blood. Only pure tertian forms found; also gametocytes on blood examination.

*F. H.*—Previous history of malaria: Latter part of August, 1915, had malarial fever in New Orleans, La. Treatment given at Government hospital, 20 grains quinine bisulphate daily, alternating with 40 grains daily for two weeks, then 10 grains daily for six weeks. Total administered, 840 grains of quinine bisulphate in acid solution. Blood examination in October, 1915, showed absence of parasites, and none upon subsequent examinations.

Feb. 21, 1916. Bitten by mosquitoes Nos. 24 and 25.

March 7. Headache and general lassitude. Moderate number of half-grown schizonts (*P. vivax*) found.

March 9. A moderate number of well-formed pigmented schizonts, in addition to some large characteristic *vivax* rings seen.

March 10. Distinct chill with numerous asexual parasites at all stages in blood. Specific treatment begun.

*R. E. T.*—Previous history of malaria: Negative.

February 21, 1916. Bitten by mosquitoes Nos. 24 and 25.

March 4. Symptoms commence. Headache and aching legs. Feeling generally slightly "off" for two days, March 4 to 6.

March 6, 2.30 p. m., temperature, 38.4° C.; 4 p. m., temperature 39.4° C.; 7 p. m.; 38.8° C. Retired late afternoon with slight chill. Temperature at this time 37.8° C. Treated with quinine.

March 7. A few characteristic parasites of tertian malaria found.

March 8. *P. vivax* represented by moderate number of segmenting schizonts.

*Dr. R. T. O'N.*—Previous history of malaria: Estivo-autumnal in 1913; cured with quinine.

February 22, 1916. Bitten by mosquito No. 24.

March 3. Complained of pain in back and neck.

March 4. Same symptoms aggravated.

March 5. Dizziness and nausea. Experienced slight chill, followed by rise of temperature and sweating; confined to bed.

March 8. No parasites seen until today. There were present a few large forms and presegmenting pigmented schizonts. Quinine treatment begun.

*H. T.*—Previous history of malaria: No symptoms since August, 1914.

February 23, 1916. Bitten by mosquitoes Nos. 23 and 24.

March 6. Complained this afternoon of burning sensation of ears and back of head and neck. Experienced chill at night followed by fever of 39.0° C.

March 7. Generally weak and sweating profusely. Morning temperature of 38.0° C, gradually falling to 37.4° C. Confined to bed. Specific treatment begun. Blood examination showed a small number of tertian rings in size up to half-grown ameboid forms with pigment.

May 1. Relapse. Chill and fever probably malarial. Quinine taken indifferently.

May 22. Moderate numbers of *P. vivax* in all forms present in blood.

*Dr. S. L. C.*—Previous history of malaria: None since July, 1911—recovered from tertian attack.

February 23, 1916. Bitten by mosquitoes Nos. 23 and 24.

March 4 and 5. Severe headache, eyes congested, and chest sore.

March 6, afternoon. Aching joints, slight fever, gradually reaching 38.8° C. At this time blood examination proved negative.

March 7. A scanty number of typical tertian schizonts of the ameboid type found in two thin smears, and a few young rings seen in a thick smear. Specific treatment begun in the evening.

*F. W.*—Previous history of malaria negative.

February 26, 1916. Bitten by mosquito No. 23.

March 13. No symptoms with the exception of a slight headache. Parasites present; a very few trophozoites seen.

March 14. Headache and chilly sensations, knees stiff. Temperature 38.9° C. at noon falling to normal.

March 15. Slight chill at night, temperature 38.0° C. Complains of pain in knee joints and stiff neck. Scanty numbers of typical half-grown parasites in blood. Quinine given.

*F. A.*—Previous history of malaria: Had malarial attack in October, 1912, cured by specific treatment.

February 26, 1916. Bitten by mosquitoes Nos. 23 and 24.

March 11. Experienced prodromal symptoms beginning in the morning with headache; backache and aching joints in the evening. Blood examination made in the morning was negative except for two doubtful rings. Later in the evening a few distinct rings of *P. vivax* found in both thick and thin smears.

March 12. Symptoms more acute; aching in back, head, neck, and joints; temperature normal.

March 13. Complains of severe headache and pain in back.

March 14. Symptoms remain same. A moderate number of large tertian rings seen in blood. Given quinine this date.

*C. B.*—Had malaria in December, 1913, from which he recovered when given specific treatment.

February 28, 1916. Bitten by mosquitoes Nos. 23 and 24.

March 12, 11 a. m. Found a moderate number of merozoitlike parasites in blood serum and on edge of blood cells; and in one instance a parasite was found contiguous to a red cell. Gave no sign of illness of any sort at the time of blood examination.

March 13. Complained of feeling cold and was perspiring afterwards. Slight frontal headache at this time. Responded readily to quinine treatment.

*T. A. R.*—Previous history of malaria negative.

March 1, 1916. Bitten by mosquito No. 23.

March 19. Complained of headache, pain in back, and joints.

March 20. Pains continued in severity. Temperature 38.2° C. at 7 a. m.; chill at 9.30 a. m., lasting 10 to 15 minutes, followed by temperature 39.6° C. and vomiting. Temperature 38.6° C. at 6.30 p. m.

March 21. Small ring parasites found. Had distinct chill and vomiting. Moderate number of large ameboid parasites, several with pigment (*P. vivax*). Given specific treatment from this date.

*G. O.*—Previous history of malaria negative.

March 1, 1916. Bitten by mosquito No. 23.

March 19. Headache, pain in joints, general weakness. Temperature 38.6° C. at 4.15 p. m. Distinct chill at 6.30 p. m., followed by temperature 39.2° C. At 10 p. m. temperature 38.4° C., perspiring freely.

March 20. General weakness, pain in stomach, vomiting—temperature normal.

March 21. A moderate number of distinct small *vivax* rings seen in blood smears. Several ameboid forms with pigment noted. Quinine treatment given.

It is probably of little more than academic interest to ascertain whether the infection of the human host is derived from the biting in the preliminary stage or at the completion of the bite. Several authors have suggested the greater probability of the former method, among these Ross, who says, "I think that mosquitoes inject their poison before commencing to suck."

Smith<sup>1</sup> (1912), regarding the salivary excretion as a poison fluid in its action on the infected host states, "The pain is caused entirely by the action of the poi on in breaking up the blood, and as the first act of a biting mosquito is to introduce this poison into the wound, the pain and inflammation will be the same whether the insect gets its meal or not." He states further in agreement with the hypothesis of Reamur that the poisonous saliva, introduced by the parasite, functions as an anticoagulin acting just upon so much blood imbibed.

An attempt was made to ascertain if infection would follow a very short exposure to the bite of infected mosquitoes. In several instances in applying the specimens by the interrupted method, several persons were bitten in succession, and the mosquito was permitted only to insert its proboscis for a few seconds, then interrupted. For example, in one day's feeding with mosquitoes Nos. 24 and 25 four persons were bitten in the course of 2 hours and 30 minutes. The mosquitoes were of course interrupted in all but the last feeding, so that they did not become engorged upon the blood of any one person, but from the group of persons.

In every instance ample evidence was obtained to show that biting took place to the extent that distinct macules were seen on the arm of the persons serving as hosts, and the mouth parts and other visible structures of the mosquito involved were carefully examined during the biting process with a strong hand lens. Mosquitoes Nos. 24 and 25 were permitted to apply their rostrums to the fullest extent, well inserted, for periods ranging from 20 seconds to 1 minute and 20 seconds; Dr. R. C. D. was bitten at 2.30 p. m., followed by Dr. T. H. D. G. at 4 p. m., F. M. H. at 4.35 p. m., and R. E. T. at 4.55 p. m.

It is evident that for infection a short bite was quite sufficient for conveying the parasites.

In the last two experiments outlined in Table No. I, in which successful inoculations were effected (T. A. R. and G. O.), both persons were bitten by mosquito No. 23 within an interval of five minutes. Here the interruption in both inoculations was abrupt; the mosquito was not given an opportunity to complete its meal upon either host. The subsequent incubation periods were protracted, and the *Plasmodium* was not recovered before the 18th-

<sup>1</sup> Smith quoted by Howard, Dyar, and Knab (1912). The mosquitoes of North and Central America and the West Indies. Vol. I, pp. 317-318.

19th day in these instances. The three applications of this same mosquito during the following two days resulted negatively. It was observed that the biting was extremely feeble and none of the hosts felt the pain of the biting indicative of successful inoculation. This was demonstrated in the last instance, where the mosquito after barely succeeding in breaking the skin and inserting its rostrum for 20 seconds, was too exhausted for flight. However, as one may find in the description of the dissected specimen, sporozoites were still present in moderate numbers five hours after the last bite mentioned.

Plate I is a photograph of one of the crushed salivary lobes representing the degree of parasitism found in mosquito No. 23, 25 days after only a single biting of the original tertian donor. It is to be noted that the mosquito had been given an opportunity to exhaust its sporozoites in the process of biting 12 healthy persons during February 17 to March 1. Nine of these volunteers gave ample evidence of having received infective sporozoites, and in three of these infections mosquito No. 23 was wholly responsible.

#### DISCUSSION OF PRINCIPLES INVOLVED.

The factors governing the power to convey infection are regarded as dependent upon:

- (a) The number of sporozoites in the salivary glands.
- (b) The number of sporozoites discharged at each feeding.
- (c) The viability and longevity of the sporozoites in the glands.

The loss of power to convey infection in this species of *Anopheles* probably depends on the elimination of the sporozoites from the salivary glands through discharge or death of these organisms.

(a) The number of sporozoites in the salivary glands would depend on the degree of infection, namely, the number of ripe oocysts and the number of expelled oocyst sporozoites which succeed in migrating into the glands.

(b) The number of sporozoites discharged at each feeding would likely depend on the length of time the mouth parts of the mosquito were applied in one or more feedings. This factor would probably be influenced by the salivary discharge, whether continuous or not. If we take for granted that the stomach oocysts have exhausted themselves as to sporozoite production and that gland sporozoites only are to be accounted for, then only the interval during feedings must be taken into consideration; providing also that the salivary glands have attained their full virulence; that is, have become invaded by all of the sporozoites originally discharged into the cœlom or at least until the time when no more sporozoites enter the glands.

The number of sporozoites injected into the intermediate host may depend in a measure on the duration of the bite. It has been demonstrated by Nuttall and Shipley (1901) (Studies in Relation to

Malaria, Jour. of Hygiene, vol. 1) that the quantity of saliva is in direct proportion to the length of time the proboscis of the mosquito is inserted.

Ross (1910, p. 88) has stated in commenting on the numbers of protospores (sporozoites) which enter the human blood: "This must depend (a) upon the number of spores in the biting insect's salivary glands, and (b) upon the number of times it is allowed to bite its victim. I think that mosquitoes inject their poison before commencing to suck. If this is the case an insect which bites a person several times (as, for instance, when he is asleep) is likely to inoculate many more protospores than one which succeeds in biting only once," (c) the viability and longevity of the sporozoites in the glands may possibly be influenced by temperature and diet. Investigations have tended to show that these factors affect the development of the zygote preceding the formation of mature oocysts so that their relation to gland sporozoites need not be considered here.

#### SUMMARY.

In 17 experiments in which human beings were employed to test the infectibility of *Anopheles punctipennis* with *Plasmodium vivax*, 14 cases of malarial fever resulted. The sporozoites in the mosquitoes used developed 10-22 days after the definitive hosts were given an opportunity to bite a patient harboring a scanty number of mature tertian gametocytes.

In an attempt to infect several persons with a single specimen of *Anopheles punctipennis*, one mosquito proved to be the sole infective agent in one experiment and one proved to be the sole infective agent in three experiments. These two specimens when applied to the same person transmitted the infection in five cases, while one of them used with a third mosquito succeeded in infecting four persons.

In these experimental inoculations it was demonstrated that in nine instances in which two mosquitoes succeeded in transmitting malaria at least one of the pair was proved to be capable of causing the disease when used singly.

It was demonstrated in 11 experiments that short exposure to bites was sufficient to cause successful transmission of the disease.

In all of the successful inoculations only tertian infection was reproduced. *Plasmodium vivax* was demonstrated microscopically.

**PLAGUE-PREVENTION WORK.**

**CALIFORNIA.**

The following report of plague-prevention work in California for the week ended August 5, 1916, was received from Senior Surg. Pierce, of the United States Public Health Service, in charge of the work:

FEDERAL AND COUNTY INSPECTION SERVICE.

[For the enforcement of the law of June 7, 1913.]

Counties.	Number of inspections.	Number of re-inspections.	Acres inspected.	Acres re-inspected.	Acres treated.		Holes treated.
					Waste balls.	Grain.	
Alameda.....		109		29,609		3,365	
Contra Costa.....		62		16,731		1,897	
Stanislaus.....	106	33	51,642	8,939	514	5,053	815
San Benito.....	65	40	23,361	18,932		18,811	
Santa Cruz.....		23		7,301		2,540	
Merced.....	16		25,000				
Santa Clara.....	41	5	16,477	1,840		4,776	
Monterey.....	50	5	37,436	2,300		3,200	
Total.....	278	277	153,916	85,652	514	39,642	815

**SQUIRRELS COLLECTED AND EXAMINED FOR PLAGUE.**

Counties.	Collected.	Examined.	Infected.	Counties.	Collected.	Examined.	Infected.
Merced.....	103	103	( <sup>1</sup> )	Madera.....	6	6	( <sup>1</sup> )
Kern.....	21	21	( <sup>1</sup> )	Total.....	130	130	( <sup>1</sup> )

<sup>1</sup> None.

**RATS COLLECTED AND EXAMINED.**

Cities.	Collected.	Examined.	Infected.
Oakland.....	39	39	( <sup>1</sup> )
Richmond.....	89	89	( <sup>1</sup> )
Pittsburg.....	143	98	( <sup>1</sup> )
Total.....	271	226	( <sup>1</sup> )

<sup>1</sup> None.

**RANCHES INSPECTED AND HUNTED OVER.**

Merced County.....	5
Madera County.....	1
Kern County.....	1
Total.....	7

**RECORD OF PLAGUE INFECTION.**

Places in California.	Date of last case of human plague.	Date of last case of rat plague.	Date of last case of squirrel plague.	Total number rodents found infected since May, 1907.
<b>Cities:</b>				
San Francisco.....	Jan. 30, 1908	Oct. 23, 1908	( <sup>1</sup> )	398 rats.
Oakland.....	Aug. 9, 1911	Dec. 1, 1908	( <sup>1</sup> )	126 rats.
Berkeley.....	Aug. 28, 1907	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )
Los Angeles.....	Aug. 11, 1908	( <sup>1</sup> )	Aug. 21, 1908	1 squirrel.
<b>Counties:</b>				
Alameda (exclusive of Oakland and Berkeley).....	Sept. 24, 1909	<sup>2</sup> Oct. 17, 1909	June 23, 1916	293 squirrels, 1 wood rat.
Contra Costa.....	July 13, 1915	( <sup>1</sup> )	June 28, 1916	1,629 squirrels.
Fresno.....	( <sup>1</sup> )	( <sup>1</sup> )	Oct. 27, 1911	1 squirrel.
Merced.....	( <sup>1</sup> )	( <sup>1</sup> )	May 12, 1916	7 squirrels.
Monterey.....	( <sup>1</sup> )	( <sup>1</sup> )	May 27, 1916	38 squirrels.
San Benito.....	June 4, 1913	( <sup>1</sup> )	July 1, 1916	72 squirrels.
San Joaquin.....	Sept. 18, 1911	( <sup>1</sup> )	Aug. 26, 1911	18 squirrels.
Santa Clara.....	Aug. 31, 1910	( <sup>1</sup> )	June 21, 1916	32 squirrels.
San Luis Obispo.....	( <sup>1</sup> )	( <sup>1</sup> )	Jan. 29, 1910	1 squirrel.
Santa Cruz.....	( <sup>1</sup> )	( <sup>1</sup> )	May 30, 1916	5 squirrels.
Stanislaus.....	( <sup>1</sup> )	( <sup>1</sup> )	June 2, 1911	18 squirrels.
San Mateo.....	( <sup>1</sup> )	( <sup>1</sup> )	June 21, 1916	1 squirrel.

<sup>1</sup> None.

<sup>2</sup> Wood rat.



WEEK ENDED AUG. 19, 1916.

OUTGOING QUARANTINE.

Number of vessels fumigated with sulphur.	3
Number of vessels fumigated with cyanide gas	15
Pounds of sulphur used	200
Pounds of cyanide used in cyanide gas fumigation	754
Pints of sulphuric acid used in cyanide-gas fumigation	1,131
Clean bills of health issued	18
Foul bills of health issued	2

FIELD OPERATIONS.

Number of rodents trapped	7,496
Number of premises inspected	7,012
Notices served	300
Number of garbage cans installed	20

BUILDINGS RAT PROOFED.

By elevation	121
By marginal concrete wall	119
By concrete floor and wall	181
By minor repairs	284
Total buildings rat proofed	705
Square yards of concrete laid	3,304
Number of premises, planking and shed flooring removed	93
Number of buildings demolished	97
Total buildings rat proofed to date (abated)	123,631

LABORATORY OPERATIONS.

Rodents received by species:	
<i>Mus rattus</i>	178
<i>Mus norvegicus</i>	866
<i>Mus alexandrinus</i>	170
<i>Mus musculus</i>	6,094
Wood rats	60

LABORATORY OPERATIONS—continued.

Rodents received by species—Continued.	
Musk rats	10
Putrid	135
Total rodents received at laboratory	7,513
Rodents examined	1,462
Number of rats suspected of plague	129
Plague rats confirmed	2

PLAGUE RATS.

Case No. 319:	
Address, 201 Carondelet Street.	
Captured, August 1, 1916.	
Diagnosis confirmed, August 15, 1916.	
Treatment of premises: Immediate repair of all defects. Intensive trapping.	
Case No. 320:	
Address, 961 St. Mary Street.	
Captured, July 26, 1916.	
Diagnosis confirmed, August 18, 1916.	
Treatment of premises: Removal of debris. General clean-up of premises.	

PLAGUE STATUS TO AUG. 19, 1916.

Last case of human plague, Sept. 8, 1915.	
Last case of rodent plague, Aug. 1, 1916.	
Total number of rodents captured to Aug. 19	810,133
Total number of rodents examined to Aug. 19	376,295
Total cases of rodent plague to Aug. 19, by species:	
<i>Mus musculus</i>	6
<i>Mus rattus</i>	20
<i>Mus alexandrinus</i>	16
<i>Mus norvegicus</i>	278
Total rodent cases to Aug. 19, 1916	320

HAWAII—PLAGUE PREVENTION.

The following reports of plague-prevention work in Hawaii were received from Surg. Trotter, of the United States Public Health Service:

Honolulu.

WEEK ENDED AUG. 5, 1916.

Total rats and mongoose taken	386
Rats trapped	383
Mongoose trapped	3
Examined microscopically	304
Examined macroscopically	82
Showing plague infection	None.
Classification of rats trapped:	
<i>Mus alexandrinus</i>	173
<i>Mus musculus</i>	131

Classification of rats trapped—Continued.	
<i>Mus norvegicus</i>	54
<i>Mus rattus</i>	25
Average number of traps set daily	984
Cost per rat destroyed	19½ cents.
Last case rat plague, Aiea, 9 miles from Honolulu, Apr. 12, 1910.	
Last case human plague, Honolulu, July 12, 1910.	

Hilo.

WEEK ENDED JULY 29, 1916.

Number of rats and mongoose taken	2,449
Number of rats trapped	2,406
Number of rats found dead	2
Number of mongoose taken	41
Number of rats and mongoose examined macroscopically	2,449
Number of rats and mongoose plague infected	None.

Classification of rats trapped and found dead:	
<i>Mus norvegicus</i>	564
<i>Mus alexandrinus</i>	295
<i>Mus rattus</i>	602
<i>Mus musculus</i>	947
Last case of rat plague, Paauhau Sugar Co., Jan. 18, 1916.	
Last case of human plague, Paauhau Sugar Co., Dec. 16, 1915.	

<sup>1</sup> Indicates the number of rodents the tissues of which were inoculated into guinea pigs. Most of these showed on necropsy only evidence of recent inflammatory process; practically none presented gross lesions characteristic of plague infection.

# PREVALENCE OF DISEASE.

*No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring.*

## UNITED STATES.

### RECIPROCAL NOTIFICATION.

#### Minnesota.

*Cases of communicable diseases referred during July, 1916, to other State or provincial health departments by department of health of the State of Minnesota.*

Disease and locality of notification.	Referred to health authority of—	Why referred.
Anterior poliomyelitis: Green Lake Township, Kandiyohi County.	Sioux Falls, Minnehaha County, S. Dak.	Patient from South Dakota developed symptoms 6 days after arrival in Minnesota.
Smallpox: Minneapolis health department, Hennepin County.	Phillips, Price County, Wis.; Platt Falls and Prentice Junction, Minneapolis, St. Paul & Sault Ste. Marie Ry.	Patient developed smallpox en route from Wisconsin to Minnesota.
Tuberculosis: Mayo Clinic, Rochester, Olmsted County.	Denver, Denver County, Colo.; Bedford, Lawrence County, Ind.; Muncie, Delaware County, Ind.; Fort Dodge, Webster County, Iowa; Dubuque, Dubuque County, Iowa; Hampden, Ramsey County, N. Dak.; Leeds, Benson County, N. Dak.; Glasgow, Valley County, Mont.; Muskogee, Muskogee County, Okla.; Hermosa, Custer County, S. Dak.; Bloomer, Chippewa County, Wis.; Casaville, Grant County, Wis.; Monroe, Green County, Wis.; Nelson, Buffalo County, Wis.; Eagle River, Vilas County, Wis.; Eleva, Trempealeau County, Wis.; Bloomville, Lincoln County, Wis.; Moose Jaw, Saskatchewan, Canada;	11 advanced, 6 moderately advanced, 1 apparently arrested, cases left Mayo Clinic for homes.
Thomas Hospital, Minneapolis, Hennepin County.	Ellsworth, Hamilton County, Iowa; Everett, Snohomish County, Wash.	1 open and 1 apparently arrested case left Thomas Hospital for homes.
St. Paul Bureau of Health, Ramsey County.	Eau Claire, Eau Claire County, Wis...	An open case left Minnesota for Wisconsin.

**CEREBROSPINAL MENINGITIS.**

**State Reports for July, 1916.**

Place.	New cases reported.	Place.	New cases reported.
<b>California:</b>		<b>Mississippi—Continued.</b>	
Imperial County—		Fike County.....	1
Calxico.....	1	Union County.....	1
Los Angeles County.....	1	<b>Total.....</b>	<b>4</b>
Los Angeles.....	1		
Tehama County—		<b>Ohio:</b>	
Red Bluff.....	1	Cuyahoga County—	
San Joaquin County—		Cleveland.....	5
Stockton.....	3	Franklin County—	
<b>Total.....</b>	<b>7</b>	Columbus.....	1
<b>Indiana:</b>		Hamilton County—	
Gibson County.....	1	Cincinnati.....	2
Laporte County.....	1	Jefferson County—	
St. Joseph County.....	1	Steubenville.....	1
<b>Total.....</b>	<b>3</b>	Lawrence County.....	1
<b>Iowa:</b>		Mahoning County—	
Floyd County.....	1	Struthers.....	1
<b>Kansas:</b>		Montgomery County.....	2
Butler County.....	1	Perry County.....	1
Crawford County.....	1	Sandusky County.....	1
Ford County.....	1	Stark County.....	1
Harvey County.....	1	Summit County—	
Leavenworth County—		Akron.....	1
Leavenworth.....	1	Trumbull County—	
Lincoln County.....	1	Warren.....	1
Montgomery County.....	1	<b>Total.....</b>	<b>18</b>
Shawnee County—		<b>South Carolina:</b>	
Topeka.....	1	Greenwood County.....	1
<b>Total.....</b>	<b>8</b>	Orangeburg County.....	1
<b>Louisiana:</b>		<b>Total.....</b>	<b>2</b>
St. Landry Parish.....	1	<b>Virginia:</b>	
<b>Maryland:</b>		Accomac County.....	1
Baltimore.....	3	Albemarle County.....	1
Baltimore County—		Alleghany County.....	1
Fort Howard.....	1	Appomattox County.....	1
Frederick County—		Campbell County.....	1
Frederick.....	1	Elizabeth City County.....	1
<b>Total.....</b>	<b>5</b>	Henry County.....	1
<b>Minnesota:</b>		Lee County.....	1
St. Louis County—		Madison County.....	1
Eveleth.....	1	Middlesex County.....	2
<b>Mississippi:</b>		Norfolk County.....	1
Lawrence County.....	1	Orange County.....	1
Pearl River County.....	1	Roanoke County.....	1
		Scott County.....	1
		Wise County.....	1
		<b>Total.....</b>	<b>16</b>
		<b>Washington:</b>	
		Lewis County.....	1

**City Reports for Week Ended Aug. 12, 1916.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Baltimore, Md.....	1	2	Milwaukee, Wis.....	2	2
Binghamton, N. Y.....	1	1	Newark, N. J.....	1	7
Boston, Mass.....	1	1	New York, N. Y.....	5	2
Buffalo, N. Y.....	2	1	Philadelphia, Pa.....	2	1
Butte, Mont.....	1	1	Pittsburgh, Pa.....	2	1
Camden, N. J.....	1	2	Pittsfield, Mass.....	2	1
Chicago, Ill.....	1	2	St. Louis, Mo.....	2	1
Detroit, Mich.....	1	1	West Hoboken, N. J.....	1	1

**DIPHTHERIA.**

See Diphtheria, measles, scarlet fever, and tuberculosis, page 2364.

**ERYSIPELAS.****City Reports for Week Ended Aug. 12, 1916.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Binghamton, N. Y. ....	1		Newport, R. I. ....		1
Boston, Mass. ....		1	New York, N. Y. ....		1
Buffalo, N. Y. ....	1		Philadelphia, Pa. ....	1	
Chicago, Ill. ....	6	1	Pittsburgh, Pa. ....	2	
Cleveland, Ohio. ....	2		Rochester, N. Y. ....	1	
Detroit, Mich. ....	1		St. Joseph, Mo. ....	1	
Kalamazoo, Mich. ....	1		St. Louis, Mo. ....	2	1
Los Angeles, Cal. ....	2		Seattle, Wash. ....	2	
Milwaukee, Wis. ....	4	1			

**LEPROSY.****Massachusetts—Boston.**

During the week ended August 12, 1916, one case of leprosy was reported at Boston, Mass.

**Montana—Whitefish.**

During the month of July, 1916, a case of leprosy, in the person of M. H., 27, male, Chinese, born in Japan, in the United States for nine years, was reported at Whitefish, Mont.

**Washington—Bellingham.**

Surg. Lloyd reported August 19 that a case of leprosy had been notified at Bellingham, Wash. The patient is a Greek, A. A., 31 years old, who has been working in the vicinity of Bellingham at lumber camps. He says that he has been in the United States more than three years.

**MALARIA.****State Reports for July, 1916.**

Place.	New cases reported.	Place.	New cases reported.
California:		California—Continued.	
Alameda County—		San Joaquin County . . . . .	3
Berkeley . . . . .	3	Lodi . . . . .	1
Butte County . . . . .	28	Stockton . . . . .	3
Calaveras County—		Santa Clara County—	
Angels Camp . . . . .	1	Palo Alto . . . . .	1
Cotusa County . . . . .	12	Siskiyou County . . . . .	2
Cotusa . . . . .	2	Solano County—	
Contra Costa County . . . . .	2	Vacaville . . . . .	1
Fresno County . . . . .	7	Stanislaus County—	
Clovis . . . . .	1	Newman . . . . .	1
Firebaugh . . . . .	3	Tehama County—	
Glenn County—		Red Bluff . . . . .	3
Orland . . . . .	5	Tehama . . . . .	2
Kern County . . . . .	1	Tulare County . . . . .	6
Bakersfield . . . . .	5	Tulare . . . . .	1
Merced County . . . . .	3	Tuolumne County—	
Merced . . . . .	2	Sonora . . . . .	1
Napa County—		Ventura County—	
Napa . . . . .	1	Santa Paula . . . . .	7
Placer County—		Yolo County . . . . .	1
Rocklin . . . . .	2		
San Francisco County—		Total . . . . .	114
San Francisco . . . . .	3		

MALARIA—Continued.

State Reports for July, 1916—Continued.

Place.	New cases reported.	Place.	New cases reported.
<b>Kansas:</b>		<b>Mississippi—Continued.</b>	
Butler County .....	3	Itawamba County .....	119
Johnson County.....	1	Jackson County .....	32
Montgomery County.....	1	Jasper County .....	168
Osage County .....	2	Jefferson County.....	140
<b>Total</b> .....	<b>7</b>	Jefferson Davis County .....	81
<b>Louisiana:</b>		Jones County .....	342
Acadia Parish.....	25	Kemper County .....	130
Allen Parish .....	12	Lafayette County .....	210
Ascension Parish .....	1	Lamar County .....	85
Beauregard Parish .....	1	Lauderdale County .....	235
Bienville Parish .....	4	Lawrence County .....	152
Bossier Parish .....	5	Leake County .....	127
Caddo Parish .....	11	Lee County .....	382
Caldwell Parish.....	4	Leflore County .....	1,039
Claborne Parish .....	5	Lincoln County .....	173
De Soto Parish .....	12	Lowndes County .....	141
East Baton Rouge Parish.....	8	Madison County .....	290
East Feliciana Parish .....	3	Marion County .....	257
Evangeline Parish .....	1	Marshall County .....	216
Franklin Parish .....	2	Monroe County .....	108
Grant Parish .....	1	Montgomery County.....	180
Iberia Parish .....	10	Neshoba County .....	127
Jackson Parish .....	4	Newton County .....	70
Lafayette Parish .....	7	Noxubee County .....	67
Madison Parish .....	9	Oktibbeha County .....	131
Morehouse Parish .....	8	Panola County .....	535
Rapides Parish .....	13	Pearl River County .....	777
Richland Parish .....	20	Perry County .....	85
St. James Parish .....	7	Pike County .....	70
St. Landry Parish .....	23	Pontotoc County .....	97
St. Mary Parish .....	10	Prentiss County .....	133
St. Martin Parish .....	1	Quitman County .....	214
St. Tammany Parish .....	10	Rankin County .....	77
Tangipahoa Parish .....	20	Scott County .....	221
Terrebonne Parish .....	2	Sharkey County .....	82
Union Parish .....	2	Simpson County .....	146
Vermilion Parish .....	2	Smith County .....	155
Vernon Parish .....	3	Stone County .....	25
Webster Parish .....	5	Sunflower County .....	1,907
West Carroll Parish .....	9	Tallahatchie County .....	550
West Feliciana Parish.....	1	Tate County .....	416
Winn Parish .....	11	Tippah County .....	71
<b>Total</b> .....	<b>272</b>	Tishomingo County .....	118
<b>Maryland</b> .....	<b>5</b>	Tunica County .....	391
<b>Mississippi:</b>		Union County .....	221
Adams County .....	135	Walthall County .....	50
Alcorn County .....	82	Warren County .....	664
Amite County .....	154	Washington County.....	623
Attala County .....	207	Wayne County .....	54
Benton County .....	55	Wilkinson County .....	141
Boivar County .....	1,589	Winston County .....	252
Cahoon County .....	216	Yalobusha County.....	248
Carroll County .....	317	<b>Total</b> .....	<b>21,091</b>
Chickasaw County .....	118	<b>New Jersey:</b>	
Choctaw County .....	56	Bergen County .....	11
Claborne County .....	136	Camden County .....	1
Clarke County .....	59	Essex County .....	12
Clay County .....	62	Hudson County .....	2
Coahoma County .....	1,016	Morris County .....	3
Copalua County .....	258	Passaic County .....	5
Covington County .....	169	Somerset County.....	12
De Soto County .....	202	Sussex County .....	21
Forrest County .....	232	Union County .....	4
Franklin County .....	186	<b>Total</b> .....	<b>71</b>
George County .....	42	<b>Ohio:</b>	
Greene County .....	43	Cuyahoga County—	
Grenada County .....	149	Cleveland .....	1
Hancock County .....	147	Hamilton County—	
Harrison County .....	120	Cincinnati .....	1
Hinds County .....	673	Vinton County.....	1
Holmes County .....	821	<b>Total</b> .....	<b>3</b>
Issaquena County .....	110		

## MALARIA—Continued.

## State Reports for July, 1916—Continued.

Place.	New cases reported.	Place.	New cases reported.
South Carolina:		Virginia—Continued.	
Aiken County.....	1	Greensville County.....	31
Beaufort County.....	15	Halifax County.....	44
Cherokee County.....	2	Hanover County.....	22
Chester County.....	6	Henrico County.....	33
Greenville County.....	7	Isle of Wight County.....	27
Greenwood County.....	4	James City County.....	8
Horry County.....	5	King and Queen County.....	17
Laurens County.....	4	King William County.....	7
Lexington County.....	1	Lancaster County.....	14
Marion County.....	6	Loudoun County.....	6
Orangeburg County.....	50	Louisa County.....	5
Union County.....	10	Lunenburg County.....	10
Williamsburg County.....	25	Mathews County.....	6
York County.....	5	Mecklenburg County.....	30
Total.....	141	Middlesex County.....	26
Virginia:		Montgomery County.....	1
Accomac County.....	19	Nansemond County.....	52
Albemarle County.....	6	Nelson County.....	6
Alexandria County.....	6	New Kent County.....	16
Alleghany County.....	2	Norfolk County.....	56
Amelia County.....	6	Northampton County.....	33
Appomattox County.....	2	Northumberland County.....	37
Augusta County.....	1	Nottoway County.....	2
Bedford County.....	9	Orange County.....	7
Botetourt County.....	2	Pittsylvania County.....	28
Brunswick County.....	13	Powhatan County.....	11
Buckingham County.....	2	Princess Anne County.....	60
Campbell County.....	9	Prince Edward County.....	6
Caroline County.....	29	Prince George County.....	16
Charles City County.....	6	Prince William County.....	1
Charlotte County.....	8	Roanoke County.....	2
Chesterfield County.....	15	Rockbridge County.....	2
Culpeper County.....	2	Scott County.....	4
Cumberland County.....	15	Smyth County.....	1
Dinwiddie County.....	7	Southampton County.....	29
Elizabeth City County.....	6	Spotsylvania County.....	6
Essex County.....	19	Stafford County.....	8
Fairfax County.....	12	Surry County.....	20
Fluvanna County.....	8	Sussex County.....	12
Franklin County.....	1	Tazewell County.....	3
Frederick County.....	2	Warren County.....	2
Giles County.....	5	Warwick County.....	32
Gloucester County.....	12	Washington County.....	1
Goochland County.....	2	York County.....	15
Green County.....	1	Total.....	982

## City Reports for Week Ended Aug. 12, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Birmingham, Ala.....		1	New York, N. Y.....		1
Charleston, S. C.....		1	Norfolk, Va.....	1	1
Fort Worth, Tex.....	1		Philadelphia, Pa.....	1	1
Little Rock, Ark.....	1		Portsmouth, Va.....		1
Mobile, Ala.....	1	1	Richmond, Va.....	5	
Newark, N. J.....	1		Sacramento, Cal.....		1
New Orleans, La.....	11	1			

## MEASLES.

## Washington—Seattle.

Surg. Lloyd reported August 18: During the week ended August 12, 1916, five cases of measles were notified in Seattle, Wash., making a total of 5,375 cases with 9 deaths since the beginning of the epidemic February 15, 1916.

See also Diphtheria, measles, scarlet fever, and tuberculosis, page 2364.

## PELLAGRA.

## State Reports for July, 1916.

Place.	New cases reported.	Place.	New cases reported.
<b>Kansas:</b>		<b>Mississippi—Continued.</b>	
Crawford County.....	1	Pontotoc County.....	3
<b>Louisiana:</b>		Prentiss County.....	2
Allen Parish.....	1	Quitman County.....	30
Caddo Parish.....	1	Rankin County.....	7
Caldwell Parish.....	1	Scott County.....	26
De Soto Parish.....	1	Simpson County.....	3
East Carroll Parish.....	4	Stone County.....	2
East Feliciana Parish.....	4	Sunflower County.....	91
Jackson Parish.....	1	Tallahatchie County.....	25
Morehouse Parish.....	2	Tate County.....	24
Rapides Parish.....	5	Tippah County.....	4
St. Mary Parish.....	3	Tishomingo County.....	7
St. Tammany Parish.....	1	Tunica County.....	14
Tangipahoa Parish.....	1	Union County.....	6
Tensas Parish.....	1	Walthall County.....	1
Union Parish.....	1	Warren County.....	10
Vermilion Parish.....	1	Washington County.....	24
Vernon Parish.....	3	Wayne County.....	3
Total.....	31	Wilkinson County.....	2
		Winston County.....	3
		Yalobusha County.....	8
		Yazoo County.....	37
		Total.....	1,047
<b>Mississippi:</b>		<b>New Jersey:</b>	
Adams County.....	3	Passaic County.....	1
Alcorn County.....	3		
Amite County.....	1	<b>South Carolina:</b>	
Attala County.....	5	Anderson County.....	5
Bolivar County.....	107	Cherokee County.....	1
Calhoun County.....	4	Chester County.....	3
Carroll County.....	11	Greenville County.....	5
Chickasaw County.....	7	Greenwood County.....	1
Choctaw County.....	2	Laurens County.....	5
Claiborne County.....	1	Marion County.....	7
Clarke County.....	8	Newberry County.....	1
Clay County.....	8	Orangeburg County.....	3
Coahoma County.....	115	Pickens County.....	2
Copiah County.....	22	Spartanburg County.....	14
Covington County.....	16	Union County.....	4
De Soto County.....	52	York County.....	4
Forrest County.....	17	Total.....	55
George County.....	5		
Greene County.....	4	<b>Virginia:</b>	
Grenada County.....	11	Amherst County.....	3
Hancock County.....	1	Bath County.....	1
Harrison County.....	14	Brunswick County.....	4
Hinds County.....	56	Campbell County.....	1
Holmes County.....	17	Lynchburg.....	6
Issequeuna County.....	3	Charlotte County.....	1
Itawamba County.....	12	Chesterfield County.....	2
Jacks. n County.....	1	Dinwiddie County.....	4
Jasper County.....	4	Essex County.....	1
Jefferson Davis County.....	1	Fluvanna County.....	2
Jones County.....	19	Green County.....	1
Kemper County.....	2	Hanover County.....	7
Lafayette County.....	5	Isle of Wight County.....	1
Lamar County.....	9	James City County.....	9
Lauderdale County.....	23	Mecklenburg County.....	2
Lawrence County.....	5	Middlesex County.....	3
Leake County.....	1	Norfolk County.....	1
Lee County.....	22	Northampton County.....	8
Leflore County.....	19	Pittsylvania County— Danville.....	4
Lincoln County.....	12	Princess Anne County.....	1
Lowndes County.....	7	Prince George County.....	1
Madison County.....	4	Pulaski County.....	1
Marion County.....	5	Rockingham County.....	1
Marshall County.....	22	Smyth County.....	2
Monroe County.....	3	Stafford County.....	2
Montgomery County.....	1	Sussex County.....	2
Neshoba County.....	10	Washington County.....	2
Noxubee County.....	15	Total.....	73
Oktibbeha County.....	2		
Panola County.....	9		
Pearl River County.....	1		
Perry County.....	3		
Pike County.....	5		

**PELLAGRA—Continued.****City Reports for Week Ended Aug. 12, 1916.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Birmingham, Ala.....		1	Nashville, Tenn.....	6	
Boston, Mass.....		1	New Orleans, La.....	3	
Charleston, S. C.....		1	Richmond, Va.....		1
Concord, N. H.....		1	Washington, D. C.....	1	
Memphis, Tenn.....		1			

**PLAGUE.****Louisiana—New Orleans—Plague-Infected Rat Found.**

Passed Asst. Surg. Simpson reported August 22 that a rat which was trapped July 18, 1916, at 601 South Pierce Street, was proved positive for plague August 22, 1916.

**PNEUMONIA.****City Reports for Week Ended Aug. 12, 1916.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Chicago, Ill.....	60	31	Newark, N. J.....	5	6
Cleveland, Ohio.....	9	6	Newport, Ky.....	2	2
Detroit, Mich.....	1	2	Norfolk, Va.....	1	1
Flint, Mich.....	2		Philadelphia, Pa.....	11	9
Fort Worth, Tex.....	1		Pittsburgh, Pa.....	7	7
Kalamazoo, Mich.....	1	1	Schenectady, N. Y.....	1	
Los Angeles, Cal.....	3	2	Topeka, Kans.....	1	1
Manchester, N. H.....	1	1			

**POLIOMYELITIS (INFANTILE PARALYSIS).****Delaware.**

The State health officer of Delaware reported, August 22, that five cases of poliomyelitis had been notified in Delaware.

**Illinois.**

The State health officer of Illinois reported that from July 1 to August 26, 1916, 355 cases of poliomyelitis, with 31 deaths, were reported to the Illinois State Board of Health. On August 26 there were 192 cases under quarantine in the State and 32 cases were under investigation.

**Kentucky.**

*Covington.*—The State health officer of Kentucky reported that a case of poliomyelitis was notified at Covington, Ky., August 24, 1916.

**Louisiana.**

Collaborating Epidemiologist Dowling reported that during the week ended August 26 three cases of poliomyelitis were notified in the State of Louisiana—two cases in the city of New Orleans, and one in Abbeville, Vermilion Parish.

## POLIOMYELITIS (INFANTILE PARALYSIS)—Continued.

## Maine.

The State health officer of Maine reported that from January 1 to August 21, 1916, 14 cases of poliomyelitis were reported to the State board of health of Maine.

## Maryland.

*Baltimore.*—Surg. Vogel reported August 28 that during the week ended August 26, 1916, nine cases of poliomyelitis were notified in Baltimore, with three deaths.

## Michigan.

*Detroit.*—Senior Surg. Austin reported that during the week ended August 26, 1916, five cases of poliomyelitis were notified in Detroit, Mich.

## Minnesota.

Collaborating Epidemiologist Bracken reported by telegraph, August 28, that during the week ended August 26 the following cases of poliomyelitis were reported to the Minnesota State Board of Health:

*Cases of poliomyelitis notified in the State of Minnesota Aug. 20 to 26, 1916, inclusive.*

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Anoka County:			Olmsted County—Contd.		
Columbia Heights Village.....	1		Pleasant Grove Township.....	2	
Becker County:			Rochester City.....	3	
White Earth Village.....	1		Otter Tail County:		
Carver County:			Edna Township.....	1	
Watertown Township.....	1		Fergus Falls City.....	2	
Clay County:			Perham Village.....	1	
Hawley Village.....	2		Pipestone County:		
Dodge County:			Rock Township.....	1	
Hayfield Village.....	1		Ramsey County:		
West Concord Village.....	1		St. Paul City.....	12	
Goodhue County:			Redwood County:		
Burnside Township.....	1		New Avon Township.....	1	
Cherry Grove Township.....		1	Sundown Township.....	1	
Goodhue Village.....	1		Renville County:		
Red Wing city.....	2	1	Beaver Falls Township... ..	1	
Irenepin County:			Camp Township.....	2	
Minneapolis city.....	8	1	Rice County:		
St. Louis Park Village.....	1		Morristown Township... ..	1	
Kandiyohi County:			Sibley County:		
Willmar city.....	1		Green Isle Township.....	1	
Ilesneur County:			Stearns County:		
Elysian Township.....	1		Farming Township.....	1	
Lincoln County:			Melrose Township.....	1	
Hope Township.....	1		Munson Township.....	1	
Mahnomen County:			Staugust Township.....	2	
Chief Township.....	1		Steele County:		
Naytahwaush.....	1		Owatonna City.....	1	
Mower County:			Todd County:		
Adams Village.....	1		Grey Eagle.....	3	
Taopi Township.....	1		Little Sauk.....	1	
Murray County:			Wabasha County:		
Lake Wilson Township... ..	2		Wabasha City.....	1	
Olmsted County:			Winona County:		
Byron Village.....	1		Winona City.....	3	
Cascade Township.....	1				2

**POLIOMYELITIS (INFANTILE PARALYSIS)—Continued.****Montana.**

The State health officer of Montana reported August 28: During the week ended August 26 one case of poliomyelitis was notified at Billings and one at Columbus, Stillwater County. He states that official information from the medical supervisor of the Crow Reservation shows 12 positive and 5 suspicious cases on the reservation.

**New Jersey.**

The State health officer of New Jersey reported that from July 1 to August 28, 1916, inclusive, 2,478 cases of poliomyelitis were reported to the department of health of New Jersey. The following table shows the number of cases reported from each county:

*Cases of poliomyelitis reported to the State department of health of New Jersey from July 1 to Aug. 28, 1916, inclusive.*

County.	Cases.	County.	Cases.
Atlantic.....	11	Monmouth.....	119
Bergen.....	99	Morris.....	58
Burlington.....	12	Ocean.....	6
Camden.....	64	Passaic.....	64
Cape May.....	7	Salem.....	10
Cumberland.....	3	Somerset.....	21
Essex.....	1,232	Sussex.....	9
Gloucester.....	9	Union.....	124
Hudson.....	441	Warren.....	3
Hunterdon.....	25	Total.....	2,478
Mer. er.....	36		
Middlesex.....	127		

**New York.**

*New York City.*—Surg. Lavinder reported August 23: New cases poliomyelitis, 131; deaths, 42. August 24: New cases, 109; deaths, 31. August 25: New cases, 95; deaths, 22. August 26: New cases, 91; deaths, 25. August 27: New cases, 83; deaths, 21. August 28: New cases, 43; deaths, 25. August 29: New cases, 73; deaths, 32. August 30: New cases, 89; deaths, 22. Approximate corrected totals: Cases, 7,993; deaths, 1,911. "General decline continues."

**North Carolina.**

The State health officer of North Carolina reported August 23 that within the last month 10 cases of poliomyelitis had occurred in Cabarrus County. No case had occurred since August 13. Three of the cases were notified in Concord; one at Glass, a rural settlement about 4 miles from Concord; and five at Kannapolis.

**POLIOMYELITIS (INFANTILE PARALYSIS)—Continued.****Ohio.**

*Cincinnati.*—Asst. Surg. Bolten reported August 21: Two additional cases of poliomyelitis in Cincinnati during the week ended August 19, 1916. Five additional positive cases, with 1 death, and 2 suspected cases, were notified during the week ended August 26, 1916, making a total of 16 cases, with 3 deaths, since July 12.

*Cleveland.*—Surg. Holt reported August 28: Three new cases of poliomyelitis, with 1 death, during the week ended August 26; total, 19 cases, with 3 deaths.

**Pennsylvania.**

*Philadelphia.*—The city health officer of Philadelphia reported that during the week ended August 26, 1916, 132 cases of poliomyelitis were notified in Philadelphia, with 39 deaths. Since July 1, 1916, 382 cases of poliomyelitis have been notified in Philadelphia, with 101 deaths.

*Pittsburgh.*—Surg. Schereschewsky reported August 28: One additional case of poliomyelitis in Pittsburgh; total since July 1, 11 cases, with 3 deaths.

**Rhode Island.**

Acting Asst. Surg. Houghton reported August 21 that during the week ended August 19, 1916, 14 cases of poliomyelitis were notified in the State of Rhode Island as follows: Providence, 3 cases; Bristol, 1; Pawtucket, 1; Lincoln, 1; Warren, 1; Middletown, 1; Portsmouth, 1; Cranston, 2; Woonsocket, 3.

Passed Asst. Surg. Marshall reported August 28 that during the week ended August 26, 1916, 16 cases of poliomyelitis were notified in Rhode Island as follows: Providence, 5 cases; Bristol, 1; Cranston, 2; Westerly, 3; Exeter, 1; East Providence, 1; Johnston, 1; Woonsocket, 2.

The total number of cases of poliomyelitis reported in Rhode Island since July 22, 1916, is 76.

**Texas.**

*El Paso.*—Acting Asst. Surg. Tappan reported August 25 that a case of poliomyelitis had been notified in El Paso, Tex.

**Virginia.**

The State health officer of Virginia reported that since January 1, 1916, poliomyelitis has been reported to the State board of health as shown in the table following:

## POLIOMYELITIS (INFANTILE PARALYSIS)—Continued.

## Virginia—Continued.

Month.	Cases.	Deaths.	Month.	Cases.	Deaths.
January.....	14	1	June.....	10	.....
February.....	10	2	July.....	18	1
March.....	12	1	August 1 to 26.....	14	1
April.....	9	2	Total.....	102	9
May.....	15	1			

The number of cases of poliomyelitis reported in Virginia this year (to August 26) is less than the average number reported each year during the corresponding period of the last four years.

## Wisconsin.

*Milwaukee.*—Passed Asst. Surg. Olesen reported August 25 that a case of poliomyelitis had been notified in Milwaukee, Wis., making a total of three cases reported within a month.

## State Reports for July, 1916.

Place.	New cases reported.	Place.	New cases reported.
California:		Iowa—Continued.	
Alameda County—		Jackson County.....	1
Hayward.....	1	Muscatine County.....	1
Imperial County—		Pocahontas County.....	1
Calxico.....	1	Polk County.....	2
Los Angeles County.....	2	Scott County.....	2
Los Angeles.....	2	Story County.....	2
San Francisco County—		Tama County.....	1
San Francisco.....	5	Wapello County.....	3
Solano County—		Winnebago County.....	1
Vallejo.....	1	Wright County.....	1
Total.....	12	Total.....	30
Indiana:		Kansas:	
Allen County.....	2	Chautauqua County.....	1
Boone County.....	1	Cowley County.....	1
Clark County.....	2	Ellis County.....	1
Daviess County.....	1	Finney County.....	1
Dearborn County.....	1	Greenwood County.....	1
Decatur County.....	1	McPherson County.....	1
Dekalb County.....	1	Meade County.....	1
Du'rcis County.....	1	Nemaha County.....	1
Fountain County.....	1	Neosho County.....	1
Grant County.....	2	Pawnee County.....	1
Harrison County.....	1	Saline County.....	1
Huntington County.....	1	Sedgwick County.....	1
Knox County.....	1	Wichita.....	1
Marion County.....	3	Sumner County.....	1
Miami County.....	1	Wilson County.....	1
Perry County.....	1	Total.....	14
Scott County.....	1	Louisiana:	
St. Joseph County.....	1	Avozelles Parish.....	6
Vanderburg County.....	1	Beauregard Parish.....	1
Vermilion County.....	1	Calcasieu Parish.....	1
Vigo County.....	2	De Soto Parish.....	1
Total.....	27	East Feliciana Parish.....	2
Iowa:		Iberville Parish.....	1
Appanoose County.....	1	Jefferson Davis Parish.....	2
Benton County.....	1	Livingston Parish.....	1
Buchanan County.....	2	St. Landry Parish.....	2
Cass County.....	1	Tangipahoa Parish.....	1
Cerro Gordo County.....	7	West Feliciana Parish.....	1
Crawford County.....	1	Total.....	19
Harrison County.....	1		
Humboldt County.....	1		

**POLIOMYELITIS (INFANTILE PARALYSIS)—Continued.**

**State Reports for July, 1916—Continued.**

Place.	New cases reported.	Place.	New cases reported.
<b>Maryland:</b>		<b>Minnesota—Continued.</b>	
Baltimore.....	3	Douglas County—	
Allegany County—		Osakis.....	1
Cumberland.....	1	Hennepin County—	
Anne Arundel County—		Minneapolis.....	48
Glen Burnie.....	1	Mound.....	1
Curtis Bay.....	1	Minnetonka Township.....	1
Annapolis Junction.....	1	Minnetrista Township.....	1
Baltimore County—		Plymouth Township.....	1
Towson, R. F. D.....	1	Isanti County—	
Highlandtown.....	1	Isanti.....	1
Howard County—		Kandiyohi County—	
Laurel, R. F. D.....	1	Green Lake Township.....	1
<b>Total.....</b>	<b>10</b>	McLeod County—	
<b>Michigan:</b>		Winsted.....	1
Alger County—		Marshall County—	
Munising.....	1	Valley Township.....	2
Arcnac County—		Martin County—	
Whitney Township.....	1	Center Creek Township.....	1
Bay County—		Morrison County—	
Fraser Township.....	1	Little Falls.....	3
Mount Forest Township.....	1	Murray County—	
Bay City.....	8	Chandler.....	1
Berrien County—		Norman County—	
Royalton Township.....	1	Halstad.....	2
Genesee County—		Olmsted County—	
Flint.....	6	Rochester.....	2
Gratiot County—		Stewartville.....	1
Washington Township.....	1	Cascade Township.....	1
Ingham County—		Orion Township.....	1
Lansing.....	2	Pleasant Grove Township.....	2
Iosco County—		Ottertail County—	
Tawas Township.....	1	Perham.....	1
Jackson County—		I'eer Creek Township.....	4
Parma.....	1	Ramsey County—	
Kalamazoo County—		St. Paul.....	21
Kalamazoo.....	1	Red Lake County—	
Kent County—		Terrebonne Township.....	1
Solon Township.....	1	Redwood County—	
Grand Rapids.....	4	Paxton Township.....	1
Monroe County—		Renville County—	
Summerfield Township.....	1	Beaver Falls Township.....	1
Oakland County—		Ericson Township.....	1
Bloomfield Township.....	1	Stearns County—	
Birmingham.....	1	St. Cloud.....	1
Pontiac.....	2	Millwood Township.....	18
Saginaw County—		Sauk Center Township.....	2
Blumfield Township.....	1	Todd County—	
Saginaw.....	1	Little Sauk Township.....	3
St. Clair County—		West Union Township.....	1
St. Clair.....	1	Wabasha County—	
Tuscola County—		Mazeppa Township.....	1
Millington Township.....	1	Washington County—	
Wayne County—		Forest Lake.....	1
Redford.....	1	Winona County—	
Springwells Township.....	1	Winona.....	1
Detroit.....	9	Richmond Township.....	1
Westford County—		Saratoga Township.....	1
Cadillac.....	1	<b>Total.....</b>	<b>142</b>
<b>Total.....</b>	<b>51</b>	<b>Mississippi:</b>	
<b>Minnesota:</b>		Adams County.....	1
Anoka County—		Alcorn County.....	1
Columbia Heights.....	3	Attala County.....	2
Beltrami County—		Bolivar County.....	1
Bemidji.....	1	Carroll County.....	1
Brown County—		Choctaw County.....	1
New Ulm.....	1	Clay County.....	1
Carlton County—		Copiah County.....	5
Cloquet.....	1	Covington County.....	2
Kalavala Township.....	1	DeSoto County.....	4
Carver County—		Forrest County.....	3
Laketown Township.....	1	Harrison County.....	1
Chisago County—		Jefferson County.....	1
Lindstrom.....	1	Jones County.....	1
Pakota County—		Lowndes County.....	2
West St. Paul.....	1	Marion County.....	1
		Monroe County.....	8
		Montgomery County.....	2

## POLIOMYELITIS (INFANTILE PARALYSIS)—Continued.

## State Reports for July, 1916—Continued.

Place.	New cases reported.	Place.	New cases reported.
<b>Mississippi—Continued.</b>		<b>Ohio—Continued.</b>	
Pike County.....	2	Logan County—	
Rankin County.....	4	Bellefontaine.....	1
Simpson County.....	3	Richland Township.....	1
Smith County.....	3	Lucas County—	
Stone County.....	1	Toledo.....	33
Tate County.....	1	Monclova Township.....	1
Tishomongo County.....	1	Spencer Township.....	1
Walthall County.....	3	Washington Township.....	1
Wayne County.....	1	Mahoning County—	
Total.....	57	East Youngstown.....	1
<b>Montana:</b>		Mercer County—	
Big Horn County.....	1	Celina.....	2
Great Falls.....	1	Miami County—	
Bozeman.....	1	Piqua.....	1
Carbon County.....	3	Morrow County—	
Great Falls.....	1	Cardington Township.....	1
Billings.....	4	Putnam County—	
Total.....	11	Union Township.....	1
<b>New Jersey:</b>		Shelby County—	
Atlantic County.....	3	Sidney.....	1
Bergen County.....	19	Clinton Township.....	1
Burlington County.....	1	Turtle Creek Township.....	1
Camden County.....	8	Summit County—	
Cumberland County.....	1	Akron.....	2
Essex County.....	350	Wood County—	
Gloucester County.....	1	Bloomdale.....	1
Hudson County.....	152	Ross Township.....	1
Hunterdon County.....	6	Wyandot County—	
Mercer County.....	3	Upper Sandusky.....	1
Middlesex County.....	32	Pitt Township.....	1
Monmouth County.....	15	Total.....	94
Morris County.....	12	<b>South Carolina:</b>	
Ocean County.....	1	Aiken County.....	1
Passaic County.....	10	Cherokee County.....	1
Somerset County.....	1	Greenville County.....	5
Union County.....	25	Lexington County.....	1
Total.....	640	Marlboro County.....	1
<b>Ohio:</b>		Oconee County.....	2
Adams County—		Orangeburg County.....	1
Oliver Township.....	1	Pickens County.....	1
Allen County—		Spartanburg County.....	3
Lima.....	3	Union County.....	1
Ashtabula County—		Williamsburg County.....	1
Conneaut.....	1	York County.....	2
Auglaize County—		Total.....	20
Cridersville.....	1	<b>Virginia:</b>	
Noble Township.....	1	Alexandria County.....	2
St. Marys Township.....	1	Appomattox County.....	1
Columbia County—		Bedford County.....	1
New Waterford.....	1	Brunswick County.....	1
Cuyahoga County—		Campbell County—	
Cleveland.....	11	Lynchburg.....	1
West Park.....	1	Caroline County.....	1
Defiance County—		Cumberland County.....	1
Mark Township.....	1	Loudoun County.....	1
Franklin County—		Louisa County.....	1
Columbus.....	5	Mecklenburg County.....	4
Fulton County—		Northampton County.....	1
German Township.....	1	Pittsylvania County.....	2
Hamilton County—		Rockbridge County.....	1
Cincinnati.....	4	Rockingham County.....	2
Hancock County—		Southampton County.....	1
Findlay.....	1	Surry County.....	2
Hardin County—		Tazewell County.....	1
Ada.....	1	Total.....	24
Henry County—		<b>Washington:</b>	
Napoleon.....	1	Chelan County.....	1
Hocking County—		King County.....	3
Star Township.....	1	Knox County.....	1
Knox County—		Spokane County.....	1
Mt. Vernon.....	1	Total.....	5
Lake County—			
Fairport Harbor.....	4		

**POLIOMYELITIS (INFANTILE PARALYSIS)—Continued.****City Reports for Week Ended Aug. 12, 1916.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Albany, N. Y.	1		Madison, Wis.	1	
Atlantic City, N. J.	7		Memphis, Tenn.	6	
Baltimore, Md.	5	4	Minneapolis, Minn.	8	
Bayonne, N. J.	12		Montclair, N. J.	4	
Birmingham, Ala.	1		Morristown, N. J.	1	2
Boston, Mass.	8	1	Newark, N. J.	260	67
Bridgport, Conn.	6	4	New Bedford, Mass.	1	
Buffalo, N. Y.	1		Newton, Mass.	2	1
Camden, N. J.	11		New York, N. Y.	1,151	301
Charleston, S. C.	1		Norristown, Pa.	1	
Chicago, Ill.	23	2	North Adams, Mass.		2
Cincinnati, Ohio	2		Orange, N. J.	9	3
Coffeyville, Kans.	1	1	Passaic, N. J.	2	
Columbia, S. C.	1		Pawtucket, R. I.	1	
Detroit, Mich.	1	1	Perth Amboy, N. J.	4	
East Orange, N. J.	2		Philadelphia, Pa.	86	21
Fall River, Mass.	1		Pittsburgh, Pa.	5	1
Fitchburg, Mass.	1		Pittsfield, Mass.	1	
Flint, Mich.	3		Plainfield, N. J.	2	1
Hagerstown, Md.	1		Portland, Me.	2	
Harrisburg, Pa.	2		Providence, R. I.	4	
Harrison, N. J.	10		Quincy, Ill.	1	
Hoboken, N. J.	1	1	St. Paul, Minn.	6	1
Jackson, Mich.	1		Saratoga Springs, N. Y.	1	1
Jersey City, N. J.	22	6	Springfield, Mass.	2	
Kalamazoo, Mich.	2		Toledo, Ohio	16	3
Kearny, N. J.	7	4	Trenton, N. J.	4	1
Lawrence, Mass.	1	1	Washington, D. C.	3	1
Long Branch, N. J.	1		West Hoboken, N. J.	9	
Los Angeles, Cal.	1		Wilkes-Barre, Pa.	1	
Lowell, Mass.	2		Worcester, Mass.	1	
Lynchburg, Va.	1				

**RABIES IN ANIMALS.****City Reports for Week Ended Aug. 12, 1916.**

During the week ended August 12, 1916, there were reported, by cities, two cases of rabies in animals; one case at Detroit, Mich., and one case at St. Paul, Minn.

**ROCKY MOUNTAIN SPOTTED FEVER.****State Reports for July, 1916.**

During the month of July, 1916, one case of Rocky Mountain spotted fever was reported in Missoula County, Mont.; and two cases of Rocky Mountain spotted fever were reported in Sweetwater County, Wyo.

**SCARLET FEVER.**

See Diphtheria, measles, scarlet fever, and tuberculosis, page 2364.

## SMALLPOX.

## State Reports for July, 1916.

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within 7 years preceding attack.	Number last vaccinated more than 7 years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
<b>California:</b>						
Fresno County.....	1					1
Los Angeles County— Los Angeles.....	1				1	
Riverside County— Perris.....	12				12	
San Bernardino County.....	1				1	
Ontario.....	1		1			
Total.....	16		1		14	1
<b>Kansas:</b>						
Allen County.....	1					1
Atchison County.....	10				10	
Barton County.....	1					1
Butler County.....	3					3
Chase County.....	2					2
Crawford County.....	1			1		
Decatur County.....	1					1
Ford County.....	3			1	1	1
Harvey County.....	1				1	
Jefferson County.....	9				4	5
Lyon County.....	2				1	1
Montgomery County.....	2				2	
Morris County.....	1					1
Neosho County.....	3					3
Osborne County.....	2				1	1
Reno County.....	7				7	
Rooks County.....	1				1	
Saline County.....	3				1	2
Sedgwick County— Wichita.....	5					5
Stafford County.....	1					1
Washington County.....	4				4	
Wyandotte County— Kansas City.....	8				3	5
Total.....	71			2	36	33
<b>Maryland:</b>						
Washington County— Hagerstown.....	9			1	8	
Total.....	9			1	8	
<b>Michigan:</b>						
Branch County— Ovid Township.....	3			1	2	
Calhoun County— Clarence Township.....	2				2	
Cass County— Dowagiac.....	1					1
Emmet County— Littlefield Township.....	1				1	
Hillsdale County— Amboy Township.....	1				1	
Wright Township.....	1				1	
Ingham County— Delhi Township.....	4			1	3	
Lansing.....	1				1	
Kalamazoo County— Kalamazoo.....	1			1		
Kent County— Grand Rapids.....	3				3	
Lapeer County— Imlay Township.....	3				3	
Lenawee County— Rollin Township.....	1					1
Hudson.....	4				4	

## SMALLPOX—Continued.

## State Reports for July, 1916—Continued.

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within 7 years preceding attack.	Number last vaccinated more than 7 years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
<b>Michigan—Continued.</b>						
Mason County—						
Ludington.....	1			1		
Monroe County—						
Monroe Township.....	2				2	
Ottawa County—						
Chester Township.....	1				1	
Presque Isle County—						
Rogers.....	2				2	
St. Clair County—						
St. Clair Township.....	3				3	
Wales Township.....	2				2	
Wayne County—						
Brownstown Township.....	1				1	
Detroit.....	43		1	4	38	
Highland Park.....	3				2	1
Wayne.....	1					1
<b>Total.....</b>	<b>85</b>		<b>1</b>	<b>8</b>	<b>72</b>	<b>4</b>
<b>Minnesota:</b>						
Blue Earth County—						
Mankato.....	2				2	
Carver County—						
Watertown.....	1				1	
Watertown Township.....	1				1	
Chippewa County—						
Montevideo.....	1				1	
Dakota County—						
West St. Paul.....	1				1	
Freeborn County—						
London Township.....	1				1	
Goodhue County—						
Cannon Falls.....	2				2	
Hennepin County—						
Minneapolis.....	8			2	6	
Orono Township.....	1				1	
Jackson County—						
Des Moines Township.....	1					1
Enterprise Township.....	1				1	
Kandiyohi County—						
Willmar.....	5		1	1	3	
Le Sueur County—						
Kasota.....	1				1	
Nicollet County—						
North Mankato.....	1				1	
Belgrade Township.....	1				1	
Nobles County—						
Little Rock Township.....	3				3	
Ramsey County—						
St. Paul.....	7				7	
St. Louis County—						
Duluth.....	3			2	1	
Todd County—						
Long Prairie.....	9		2		7	
Wright County—						
Howard Lake.....	1					1
Yellow Medicine County—						
Granite Falls.....	4				4	
<b>Total.....</b>	<b>55</b>		<b>3</b>	<b>5</b>	<b>45</b>	<b>2</b>
<b>Ohio:</b>						
Butler County—						
Hamilton.....	1				1	
Columbiana County—						
East Liverpool.....	1					1
Coshocton County	9					9
Cuyahoga County—						
Cleveland.....	14					14

## SMALLPOX—Continued.

## State Reports for July, 1916—Continued.

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within 7 years preceding attack.	Number last vaccinated more than 7 years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
Ohio—Continued.						
Defiance County—						
Defiance.....	5			1		4
Fairfield County.....	1			1		
Fayette County—						
Washington Courthouse...	1					1
Franklin County.....	2				2	
Guernsey County.....	2			1	1	
Hamilton County—						
Cincinnati.....	3			1	1	1
Henry County.....	2				2	
Lake County.....	1					1
Lawrence County.....	1					1
Licking County—						
Newark.....	1					1
Lorain County—						
Elyria.....	1				1	
Lucas County.....	17				1	16
Mahoning County—						
Youngstown.....	14				8	6
Miami County—						
Piqua.....	5			1	2	2
Muskingum County.....	2					2
Williams County.....	11				8	3
Total.....	94			5	27	62

## Miscellaneous State Reports.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Indiana (July 1-31):			Iowa (July 1-31)—Continued.		
Counties—			Counties—Continued.		
DeKalb.....	3		Webster.....	3	
Delaware.....	1		Worth.....	1	
Gibson.....	1		Wright.....	1	
Grant.....	2		Total.....	36	
Greene.....	1		Louisiana (July 1-31):		
Harrison.....	7		Parishes—		
Howard.....	29		Beauregard.....	2	
Knox.....	8		Caddo.....	14	
Kosciusko.....	1		Calcasieu.....	2	
Laporte.....	2		St. Tammany.....	1	
Madison.....	3		Vermilion.....	2	
Miami.....	10		Webster.....	1	
St. Joseph.....	1		Total.....	22	
Tipton.....	1		Mississippi (July 1-31):		
Vanderburg.....	3		Counties—		
Vermillion.....	1		Attala.....	16	
Vigo.....	7		Coahoma.....	1	
Total.....	81		Holmes.....	8	
Iowa (July 1-31):			Jones.....	2	
Counties—			Leflore.....	1	
Boone.....	2		Lowndes.....	6	
Harrison.....	1		Madison.....	10	
Humboldt.....	1		Marion.....	1	
Linn.....	5		Panola.....	1	
Louisa.....	3		Tunica.....	1	
Pottawattamie.....	1		Total.....	47	
Scott.....	2				
Sioux.....	10				
Tama.....	2				
Wayne.....	4				

**SMALLPOX—Continued.**

**Miscellaneous State Reports—Continued.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Montana (July 1-31):			Virginia (July 1-31)—Contd.		
Beaverhead County.....	1		Counties—Continued.		
Cascade County.....	10		Rockingham.....	13	
Great Falls.....	1		Wythe.....	1	
Dawson County.....	1		Total.....	50	
Deer Lodge County.....	3		Washington (July 1-31):		
Fergus County.....	14		Clarke County.....	7	
Hill County.....	15		King County.....		
Meagher County.....	1		Seattle.....	9	
Teton County.....	1		Kittitas County.....	3	
Total.....	47		Klickitat County.....	6	
South Carolina (July 1-31):			Lincoln County.....	5	
Counties—			Pierce County—		
Aiken.....	1		Tacoma.....	1	
Orangeburg.....	2		Sragit County.....	3	
Total.....	3		Srarnania County.....	1	
Virginia (July 1-31):			Spo'ane County.....	3	
Counties—			Spo'ane.....	2	
Augusta.....	4		Stevens County.....	1	
Chesterfield.....	24		Whateom County.....	11	
Fauquier.....	1		Whitman County.....	3	
Franclin.....	2		Ya'ima County.....	2	
Henrico.....	1		Total.....	57	
Henry.....	1		Wyoming (July 1-31):		
Loudoun.....	2		Counties—		
Page.....	1		Natrona.....	3	
			Sheridan.....	7	
			Total.....	10	

**City Reports for Week Ended Aug. 12, 1916.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Butte, Mont.....	2		New Orleans, La.....	1	
Detroit, Mich.....	2		Omaha, Nebr.....	4	
Evansville, Ind.....	1		St. Joseph, Mo.....	1	
Everett, Wash.....	1		Seattle, Wash.....	2	
Lincoln, Nebr.....	1		Toledo, Ohio.....	1	
Minneapolis, Minn.....	1		Wichita, Kans.....	1	

**TETANUS.**

**State Reports for July, 1916.**

During the month of July, 1916, 7 cases of tetanus were reported in California; 1 case of tetanus was reported in Kansas; and 1 case in Ohio.

**City Reports for Week Ended Aug. 12, 1916.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Albany, N. Y.....	1		Mobile, Ala.....		1
Charleston, S. C.....		1	New York, N. Y.....		2
Chicago, Ill.....	2	3	Philadelphia, Pa.....	1	
Fort Worth, Tex.....	1		Salt Lake City, Utah.....		1
Galveston, Tex.....		1	San Francisco, Cal.....	1	
Harrisburg, Pa.....	1		San Jose, Cal.....		1
Los Angeles, Cal.....		1	Wilkes-Barre, Pa.....	1	

## TUBERCULOSIS.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 2364.

## TYPHOID FEVER.

## Massachusetts—Lynn.

The State health officer of Massachusetts reported August 29 that an outbreak of typhoid fever had occurred at Lynn, Mass., 16 cases having been notified.

## State Reports for July, 1916.

Place.	New cases reported	Place.	New cases reported.
California:		Indiana:	
Alameda County.....	1	Allen County.....	10
Alameda.....	1	Boone County.....	1
Livermore.....	1	Cass County.....	5
Piedmont.....	2	Clark County.....	4
Butte County.....	1	Clay County.....	1
Oroville.....	1	Clinton County.....	1
Contra Costa County.....	2	Crawford County.....	3
Concord.....	2	Davess County.....	3
Richmond.....	1	Delaware County.....	2
Fresno County.....	3	Dubois County.....	7
Fresno.....	1	Elkhart County.....	4
Humboldt County—		Floyd County.....	5
Eureka.....	1	Gibson County.....	2
Kern County.....	10	Hamilton County.....	1
Bakersfield.....	2	Henry County.....	1
Maricopa.....	2	Howard County.....	1
Taft.....	11	Huntington County.....	3
Los Angeles County.....	5	Jackson County.....	1
Arusa.....	1	Jay County.....	1
El Monte.....	1	Jefferson County.....	1
Long Beach.....	3	Jennings County.....	2
Los Angeles.....	20	Johnson County.....	3
Pomona.....	1	Knox County.....	2
Watts.....	2	Kosciusko County.....	4
Madera County—		Lake County.....	21
Madera.....	1	Laporte County.....	1
Marin County.....	1	Lawrence County.....	6
Mendocino County.....	3	Madison County.....	1
Modoc County—		Marion County.....	27
Alturas.....	1	Martin County.....	5
Orange County.....	1	Orange County.....	1
Orange.....	2	Owen County.....	10
Santa Ana.....	1	Perry County.....	1
Sacramento County.....	1	Pike County.....	3
Sacramento.....	4	Porter County.....	1
San Diego County—		Posey County.....	1
Oceanside.....	1	Putnam County.....	1
San Diego.....	1	Randolph County.....	2
San Francisco County—		Ripley County.....	8
San Francisco.....	13	Scott County.....	5
San Joaquin County.....	3	Shelby County.....	2
Lodi.....	1	Spencer County.....	7
Stockton.....	5	St. Joseph County.....	4
San Luis Obispo County—		Sullivan County.....	2
San Luis Obispo.....	1	Switzerland County.....	5
Santa Clara County—		Tippecanoe County.....	6
San Jose.....	1	Vanderburg County.....	19
Shasta County.....	1	Vigo County.....	2
Solano County—		Warriek County.....	1
Vacaville.....	1	Washington County.....	6
Sonoma County—		Wayne County.....	4
Santa Rosa.....	1	White County.....	1
Stanislaus County.....	1	Whitley County.....	1
Oakdale.....	1		
Sutter County.....	1	Total.....	223
Tehama County.....	6		
Tulare County.....	1	Kansas:	
Ventura County.....	1	Allen County.....	1
Oxnard.....	2	Atchison County—	
		Atchison.....	1
Total.....	132	Barber County.....	2
		Barton County.....	4

TYPHOID FEVER—Continued.

State Reports for July, 1916—Continued.

Place.	New cases reported.	Place.	New cases reported.
<b>Kansas—Continued.</b>		<b>Louisiana—Continued.</b>	
Bourbon County.....	1	Claiborne Parish.....	4
Fort Scott.....	2	De Soto Parish.....	4
Brown County.....	3	East Baton Rouge Parish.....	2
Butler County.....	7	East Carroll Parish.....	1
Chase County.....	4	East Feliciana Parish.....	2
Chautauqua County.....	2	Franklin Parish.....	6
Cherokee County.....	4	Iberia Parish.....	6
Cheyenne County.....	1	Iberville Parish.....	9
Clark County.....	2	Jackson Parish.....	4
Cloud County.....	2	Jefferson Davis Parish.....	8
Coffey County.....	1	Lafayette Parish.....	6
Coville County.....	6	Livingston Parish.....	7
Crawford County.....	3	Morehouse Parish.....	7
Pittsburg.....	3	Natchitoches Parish.....	9
Dickinson County.....	2	Plaquemines Parish.....	1
Doniphan County.....	1	Pointe Coupee Parish.....	4
Douglas County.....	2	Rapides Parish.....	20
Edwards County.....	1	Red River Parish.....	5
Elk County.....	2	Richland Parish.....	1
Ellis County.....	1	Sabine Parish.....	2
Ford County.....	2	St. Helena Parish.....	2
Franklin County.....	2	St. James Parish.....	2
Gray County.....	6	St. John Parish.....	3
Greenwood County.....	6	St. Landry Parish.....	2
Harper County.....	1	St. Mary Parish.....	9
Jewell County.....	1	St. Martin Parish.....	3
Johnson County.....	2	St. Tammany Parish.....	1
Kiowa County.....	2	Tangipahoa Parish.....	5
Labetta County.....	3	Tensas Parish.....	1
Lane County.....	1	Terrebonne Parish.....	8
Leavenworth County.....	4	Union Parish.....	3
Leavenworth.....	3	Vermilion Parish.....	10
Lincoln County.....	1	Vernon Parish.....	1
Linn County.....	1	Washington Parish.....	5
Lyon County.....	5	West Carroll Parish.....	7
Marion County.....	2	Winn Parish.....	3
McPherson County.....	2		
Meade County.....	2	<b>Total.....</b>	<b>210</b>
Miami County.....	1		
Mitchell County.....	1	<b>Maryland:</b>	
Montgomery County.....	11	Baltimore.....	82
Coffey Hill.....	12	Allegany County—	
Morton County.....	10	Woodland.....	1
Neosho County.....	3	Cumberland.....	2
Ness County.....	1	Barton.....	1
Osage County.....	1	Westernport.....	2
Pawnee County.....	2	Midland.....	3
Pratt County.....	2	Miners Hospital.....	1
Reno County.....	1	Anne Arundel County—	
Hutchinson.....	1	Pasadena.....	1
Rice County.....	1	Marley.....	1
Riley County.....	2	Baltimore County—	
Rush County.....	1	Sparrows Point.....	1
Saline County.....	1	Westport.....	1
Sedgwick County.....	5	Alberton.....	1
Wichita.....	23	Randallstown.....	1
Seward County.....	3	Lansdowne.....	1
Shawnee County.....	6	Highlandtown.....	2
Topeka.....	3	Chase.....	1
Stafford County.....	4	Halethorpe.....	1
Sumner County.....	13	Parkton.....	1
Wilson County.....	4	Arlington.....	1
Woodson County.....	2	Calvert County—	
Wyandotte County—		Barstow.....	1
Kansas City.....	5	Solomons Island.....	1
		Poplars.....	1
<b>Total.....</b>	<b>223</b>	Mutual, R. F. D.....	1
		Olivet.....	1
<b>Louisiana:</b>		Caroline County—	
Acadia Parish.....	6	Henderson.....	1
Allen Parish.....	11	Ridgely, R. F. D.....	1
Assumption Parish.....	3	Preston, R. F. D.....	1
Avoyelles Parish.....	2		
Beauregard Parish.....	1	<b>Cecil County—</b>	
Bienville Parish.....	1	Cherry Hill.....	1
Bossier Parish.....	2	Rising Sun.....	1
Caddo Parish.....	8		
Calcasieu Parish.....	3	<b>Charles County—</b>	
		Chaple Point, R. F. D.....	1
		Faulkner, R. F. D.....	1

## TYPHOID FEVER—Continued.

## State Reports for July, 1916—Continued.

Place.	New cases reported.	Place.	New cases reported.
Maryland—Continued.		Maryland—Continued.	
Charles County—Continued.		Washington County—Continued.	
Waldorf.....	1	Hagerstown.....	2
Waldorf, R. F. D.....	1	Washington County Hospital.....	1
Bel Alton, R. F. D.....	1	Wicomico County—	
Dorchester County—		Salisbury, R. F. D.....	4
Fishing Creek.....	1	Sharps Point.....	1
Chateau.....	3	Mardella, R. F. D.....	1
Cambridge.....	6	Salisbury.....	3
Eldorado.....	1	Mardella.....	1
Hoopersville.....	1	Quantico.....	1
Reids Grove.....	1	Mount Herman.....	1
Thomas.....	2	Peninsula General Hospital.....	2
Ragged Point.....	1	Worcester County—	
Cambridge, R. F. D.....	1	Pocomoke.....	3
Linkwood, R. F. D.....	1		
Cambridge Hospital, R. F. D.....	1	Total.....	241
Frederick County—			
Walkersville.....	1	Michigan:	
Myersville.....	2	Alger County—	
Burkittsville.....	1	Munising.....	4
Brunswick.....	1	Antrim County—	
Buckeystown.....	1	Banks Township.....	1
Thurmont.....	1	Benzie County—	
Frederick.....	4	Frankfort.....	1
Lantz, R. F. D.....	1	Calhoun County—	
Buckeystown, R. F. D.....	1	Marengo Township.....	1
New Market.....	1	Cass County—	
Garrett County—		Wayne Township.....	1
New Germany.....	1	Chippewa County—	
Grantsville.....	1	Sault Ste. Marie.....	1
Avilton.....	1	Crawford County—	
Harford County—		Graying.....	1
Perryman.....	1	Genesee County—	
Kent County—		Flint.....	14
Chestertown.....	1	Clio.....	1
Prince George County—		Gogebic County—	
Anacostia, R. F. D.....	1	Bessemer.....	1
Brentwood.....	1	Grand Traverse County—	
Capitol Heights.....	1	Whitewater Township.....	1
Nottingham.....	1	Traverse City.....	1
Seat Pleasant, R. F. D.....	1	Grafiot County—	
Upper Marlboro.....	1	Newark Township.....	1
Suitland, R. F. D.....	1	Washington Township.....	1
Silver Hill.....	2	Ithaca.....	1
Bladensburg.....	1	Alma.....	1
Queen Annes County—		Hillsdale County—	
Stevensville.....	3	Somerset Township.....	1
Fords Store, R. F. D.....	1	Huron County—	
Barclay, R. F. D.....	1	Caseville Township.....	1
Wye Mills, R. F. D.....	1	Elkton.....	1
Centerville, R. F. D.....	1	Ingham County—	
Millington, R. F. D.....	1	Delhi Township.....	1
Chester.....	1	Lansing.....	1
St. Marys County—		Ionia County—	
St. Marys.....	1	Berlin Township.....	1
Scotland, R. F. D.....	1	Iosco County—	
Somerset County—		East Tawas.....	1
Chance.....	7	Iron County—	
Crisfield, R. F. D.....	1	Crystal Falls.....	1
Dames Quarter.....	1	Isabella County—	
Marumscoc, R. F. D.....	1	Lincoln Township.....	1
Shelton.....	1	Isabella Township.....	1
Wenona.....	2	Shepherd.....	1
Parsonsville, R. F. D.....	1	Jackson County—	
Crisfield.....	9	Waterloo Township.....	1
Marion, R. F. D.....	1	Jackson.....	1
Eden.....	2	Kalamazoo County—	
Fairmount.....	1	Alama Township.....	1
Princess Anne.....	1	Kalamazoo.....	6
Marion.....	8	Kent County—	
Marumscoc.....	1	Alpine Township.....	1
Palmetto.....	1	Sparta Township.....	1
Lawsonia.....	1	Grand Rapids.....	8
Talbot County—		Lapeer County—	
Trappe, R. F. D.....	1	Lapeer.....	1
Washington County—		Lenawee County—	
Fiddlersburg, R. F. D.....	1	Hudson Township.....	1
Smithsburg, R. F. D.....	1	Hudson.....	3

**TYPHOID FEVER—Continued.**

**State Reports for July, 1916—Continued.**

Place.	New cases reported.	Place.	New cases reported.
<b>Michigan—Continued.</b>		<b>Minnesota—Continued.</b>	
Marquette County—		Ramsey County—	
Marquette.....	1	St. Paul.....	7
Negaunee.....	4	Rice County—	
Mason County—		Faribault.....	2
Ludington.....	1	St. Louis County—	
Midland County—		Duluth.....	11
Ingersoll Township.....	1	Ely.....	20
Midland.....	3	Hibbing.....	1
Montcalm County—		Virginia.....	1
Ferris Township.....	1	Winton.....	1
Oakland County—		Morse Township.....	1
Orion.....	1	Scott County—	
Pontiac.....	1	Belle Plaine Borough.....	1
Oceana County—		Sherburne County—	
Ferry Township.....	1	Elk River.....	1
Ontonagon County—		Sibley County—	
Rockland.....	1	Arlington.....	2
Ottawa County—		Todd County—	
Wright Township.....	3	Burleene Township.....	1
Saginaw County—		Wabasha County—	
Tittabawassee Township.....	1	Glasgow Township.....	1
Saginaw.....	5	Wadena County—	
St. Clair County—		Meadow Township.....	1
Cusco Township.....	1	Wright County—	
Sanilac County—		Monticello.....	1
Watertown Township.....	1	Yellow Medicine County—	
Shiawassee County—		Granite Falls.....	1
Owosso.....	1		
Tuscola County—		<b>Total.....</b>	<b>90</b>
Novesta Township.....	3		
Van Buren County—		<b>Mississippi:</b>	
Lawrence Township.....	2	Adams County.....	17
Deatur.....	23	Alcorn County.....	22
Hartford.....	1	Amite County.....	9
Washtenaw County—		Attala County.....	14
Ann Arbor.....	3	Bolivar County.....	44
Wayne County—		Calhoun County.....	16
Romulus Township.....	1	Carroll County.....	5
Hamtramck.....	1	Chickasaw County.....	17
Detroit.....	56	Choctaw County.....	5
Wyandotte.....	2	Claiborne County.....	3
Wexford County—		Clarke County.....	20
Cadillac.....	1	Clay County.....	7
<b>Total.....</b>	<b>187</b>	Coahoma County.....	39
		Copiah County.....	43
<b>Minnesota:</b>		Covington County.....	15
Aitkin County—		De Soto County.....	20
Hill City.....	1	Forrest County.....	13
Beltrami County—		Franklin County.....	11
Baudette.....	5	George County.....	1
Benton County—		Grenada County.....	8
Rice.....	1	Hancock County.....	17
Blue Earth County—		Harrison County.....	5
Mankato.....	1	Hinds County.....	28
Crow Wing County—		Holmes County.....	12
Crosby.....	2	Issaquena County.....	2
Emily Township.....	1	Itawamba County.....	5
Dakota County—		Jackson County.....	1
Hastings.....	1	Jasper County.....	14
Hennepin County—		Jefferson County.....	1
Minneapolis.....	12	Jefferson Davis County.....	2
Isanti County—		Jones County.....	62
Springvale Township.....	1	Kemper County.....	7
Kandiyohi County—		Lafayette County.....	18
Willmar.....	1	Lamar County.....	9
Lake County—		Lauderdale County.....	24
Fall Lake Township.....	1	Lawrence County.....	3
Lincoln County—		Lee County.....	55
Hendricks.....	1	Leflore County.....	14
Olmsted County—		Lincoln County.....	11
Rochester.....	2	Lowndes County.....	5
Ottertail County—		Madison County.....	18
Fergus Falls.....	3	Marion County.....	16
Pennington County—		Marshall County.....	46
Thief River Falls.....	1	Monroe County.....	13
Polk County—		Neshoba County.....	14
Climax.....	1	Newtoz County.....	3
Scandia Township.....	2	Noxubee County.....	20
		Oktibbeha County.....	19

## TYPHOID FEVER—Continued.

## State Reports for July, 1916—Continued.

Place.	New cases reported.	Place.	New cases reported.
<b>Mississippi—Continued.</b>		<b>Ohio—Continued.</b>	
Panola County.....	27	Clark County—	
Pearl River County.....	6	Springfield.....	3
Perry County.....	4	Clermont County.....	2
Pike County.....	25	Clinton County.....	1
Prentiss County.....	7	Columbiana County.....	14
Quitman County.....	6	Crawford County.....	6
Scott County.....	15	Cuyahoga County.....	14
Sharkey County.....	1	Defiance County.....	3
Simpson County.....	27	Delaware County—	
Smith County.....	11	Delaware.....	1
Stone County.....	2	Erie County.....	7
Sunflower County.....	54	Franlin County.....	47
Tallahatchie County.....	34	Gallia County.....	4
Tate County.....	51	Guernsey County.....	5
Tippah County.....	11	Hamilton County.....	8
Tishomingo County.....	28	Hancock County.....	1
Tunica County.....	8	Harrison County.....	2
Union County.....	8	Henry County.....	1
Walthall County.....	9	Henry County.....	2
Warren County.....	7	HIGHLAND COUNTY.....	5
Washington County.....	25	Hocking County.....	6
Wayne County.....	2	Jackson County—	
Wilkinson County.....	2	Jackson.....	2
Winston County.....	10	Wellston.....	1
Yalobusha County.....	45	Jefferson County.....	5
Yazoo County.....	7	Knox County—	
Total.....	1,205	Mount Vernon.....	1
		Lawrence County.....	8
<b>Montana:</b>		Licking County.....	4
Blaine County.....	2	Logan County.....	12
Great Falls.....	7	Lorain County—	
Chouteau County.....	1	Elyria.....	1
Custer County.....	3	Lorain.....	1
Fergus County.....	1	Lucas County.....	20
Jefferson County.....	1	Mahoning County—	
Helena.....	8	Youngstown.....	10
Madison County.....	1	Marion County.....	2
Musselshell County.....	1	Medina County.....	3
Livingston.....	1	Miami County.....	5
Butte.....	2	Montgomery County.....	4
Yellowstone County.....	4	Morrow County.....	1
Total.....	32	Muskingum County—	
		Zanesville.....	3
<b>New Jersey:</b>		Paulding County.....	2
Atlantic County.....	25	Perry County.....	1
Bergen County.....	6	Pike County.....	1
Burlington County.....	10	Portage County.....	1
Camden County.....	12	Preble County.....	1
Cumberland County.....	3	Richland County.....	2
Essex County.....	8	Ross County.....	5
Gloucester County.....	3	Sandusky County.....	5
Hudson County.....	7	Scioto County.....	3
Hunterdon County.....	1	Seneca County.....	1
Mercer County.....	6	Shelby County.....	2
Middlesex County.....	5	Stark County.....	3
Monmouth County.....	20	Summit County.....	14
Morris County.....	5	Trumbull County.....	4
Ocean County.....	1	Tuscarawas County.....	6
Passaic County.....	6	Van Wert County.....	2
Somerset County.....	1	Vinton County.....	2
Union County.....	6	Washington County.....	3
Total.....	125	Wayne County.....	1
		Williams County.....	1
<b>Ohio:</b>		Wood County.....	5
Adams County.....	2	Total.....	319
Allen County—		<b>South Carolina:</b>	
Lima.....	9	Abbeville County.....	1
Ashtabula County.....	1	Aiken County.....	7
Athens County.....	5	Anderson County.....	16
Auglaize County—		Beaufort County.....	2
Wapakoneta.....	1	Charleston County.....	34
Belmont County.....	8	Cherokee County.....	13
Brown County.....	7	Chester County.....	4
Butler County.....	3	Chesterfield County.....	1
Champaign County.....	3	Clarendon County.....	2
		Darlington County.....	2

TYPHOID FEVER—Continued.

State Reports for July, 1916—Continued.

Place.	New cases reported.	Place.	New cases reported.
<b>South Carolina—Continued.</b>		<b>Virginia—Continued.</b>	
Dorchester County.....	1	Lunenburg County.....	2
Florence County.....	7	Madison County.....	5
Greenville County.....	32	Mecklenburg County.....	10
Greenwood County.....	6	Middlesex County.....	6
Hampton County.....	1	Montgomery County.....	11
Horry County.....	7	Nansemond County.....	11
Kershaw County.....	1	Nelson County.....	5
Laurens County.....	7	New Kent County.....	3
Marion County.....	2	Norfolk County.....	9
Marlboro County.....	9	Northampton County.....	17
Newberry County.....	18	Northumberland County.....	8
Oconee County.....	2	Nottoway County.....	8
Orangeburg County.....	10	Page County.....	7
Pickens County.....	23	Patrick County.....	4
Saluda County.....	2	Pittsylvania County.....	8
Spartanburg County.....	18	Danville.....	11
Sumter County.....	3	Powhatan County.....	2
Union County.....	4	Princess Anne County.....	11
Williamsburg County.....	4	Prince Edward County.....	8
York County.....	2	Prince George County.....	19
Total.....	241	Prince William County.....	1
<b>Virginia:</b>		Pulaski County.....	7
Accomac County.....	17	Rappahannock County.....	2
Albemarle County.....	19	Richmond County.....	1
Alleghany County.....	5	Roanoke County.....	18
Amelia County.....	3	Roanoke.....	9
Amherst County.....	6	Rockbridge County.....	3
Appomattox County.....	6	Rockingham County.....	8
Augusta County.....	14	Russell County.....	21
Bath County.....	1	Scott County.....	5
Bedford County.....	19	Shenandoah County.....	7
Botetourt County.....	2	Smyth County.....	16
Brunswick County.....	13	Southampton County.....	30
Buehanan County.....	1	Spotsylvania County.....	1
Buckingham County.....	6	Surry County.....	6
Campbell County.....	15	Sussex County.....	4
Lynchburg.....	11	Tazewell County.....	13
Caroline County.....	11	Warren County.....	5
Carroll County.....	7	Warwick County.....	1
Charles City County.....	1	Washington County.....	23
Chesterfield County.....	7	Westmoreland County.....	7
Clarke County.....	3	Wise County.....	7
Culpeper County.....	5	Wythe County.....	12
Cumberland County.....	3	Total.....	699
Dickinson County.....	1	<b>Washington:</b>	
Dinwiddie County.....	1	Benton County.....	1
Elizabeth City County.....	4	Chelan County.....	2
Essex County.....	8	Clarke County.....	1
Fairfax County.....	1	Columbia County.....	1
Fauquier County.....	5	Franklin County.....	4
Floyd County.....	4	Grant County.....	1
Fluvanna County.....	2	Grays Harbor County.....	1
Franklin County.....	4	King County—	
Frederick County.....	4	Seattle.....	1
Giles County.....	15	Lincoln County.....	9
Gloucester County.....	3	Okanogan County.....	2
Goochland County.....	2	Pacific County.....	1
Grayson County.....	6	Pierce County—	
Greene County.....	1	Tacoma.....	1
Halifax County.....	13	Spokane County—	
Hanover County.....	5	Spokane.....	5
Henrico County.....	6	Walla Walla County.....	3
Henry County.....	14	Whitman County.....	1
Isle of Wight County.....	13	Yakima County.....	3
James City County.....	4	Total.....	40
King and Queen County.....	4	<b>Wyoming:</b>	
King George County.....	1	Sweetwater County.....	2
King William County.....	2		
Lancaster County.....	5		
Lee County.....	11		
Loudoun County.....	10		

## TYPHOID FEVER—Continued.

## City Reports for Week Ended Aug. 12, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Albany, N. Y.	7		Memphis, Tenn.	31	4
Ann Arbor, Mich.	4		Milwaukee, Wis.	3	1
Atlantic City, N. J.	2		Minneapolis, Minn.	9	
Baltimore, Md.	48	2	Mobile, Ala.	3	
Beaver Falls, Pa.	2		Muscatine, Iowa.	1	
Birmingham, Ala.	23	4	Nashville, Tenn.	17	3
Boston, Mass.	2	1	Newark, N. J.	3	
Buffalo, N. Y.	16	2	New Bedford, Mass.	1	
Camden, N. J.	4		New Britain, Conn.	1	
Canton, Ohio.	4		New Castle, Pa.	1	
Charleston, S. C.	4	1	New Haven, Conn.	1	
Chattanooga, Tenn.	2	1	New London, Conn.	1	
Chelsea, Mass.	2		New Orleans, La.	5	1
Chicago, Ill.	30	3	Newton, Mass.	2	
Chicago, Mass.	1		New York, N. Y.	44	4
Cincinnati, Ohio.	1	2	Norfolk, Va.	9	3
Cleveland, Ohio.	3		Norristown, Pa.	4	
Coffeyville, Kans.	5		Oklahoma, Okla.	4	1
Columbia, S. C.	2		Pawtucket, R. I.	1	
Columbus, Ohio.	6		Philadelphia, Pa.	32	4
Cumberland, Md.	3		Pittsburgh, Pa.	14	1
Danville, Ill.	1		Pittsfield, Mass.	1	
Denver, Colo.	5		Portland, Me.	4	
Detroit, Mich.	21	6	Portland, Oreg.	3	
Elgin, Ill.	1		Portsmouth, Va.	3	2
Evansville, Ind.	25	1	Providence, R. I.	1	2
Fall River, Mass.	8		Reading, Pa.		2
Fitchburg, Mass.	1		Richmond, Va.	43	1
Flint, Mich.	10	1	Roanoke, Va.	4	
Fort Worth, Tex.	9		Rochester, N. Y.	2	
Galveston, Tex.	5		Sacramento, Cal.	1	
Grand Rapids, Mich.	1		Saginaw, Mich.	4	1
Hagerstown, Md.	3		St. Louis, Mo.	33	2
Harrisburg, Pa.	2		St. Paul, Minn.	2	
Hartford, Conn.	1		Salt Lake City, Utah.	4	
Indianapolis, Ind.	19		San Francisco, Cal.	5	
Jackson, Mich.	1		San Jose, Cal.		1
Jersey City, N. J.	1		Seattle, Wash.	5	
Johnstown, Pa.	1		Somerville, Mass.	1	
Kalamazoo, Mich.	1		Springfield, Ohio.	2	
Kansas City, Mo.	6	1	Toledo, Ohio.	9	3
Kearny, N. J.	1		Topeka, Kans.	1	
Kenosha, Wis.	1		Trenton, N. J.	1	
Lawrence, Mass.	1		Troy, N. Y.	2	
Lexington, Ky.	3		Washington, D. C.	21	5
Little Rock, Ark.	1		Watertown, N. Y.	2	
Long Beach, Cal.	1		Wheeling, W. Va.	8	
Los Angeles, Cal.	3		Wichita, Kans.	4	
Lowell, Mass.	5		Williamsport, Pa.	1	
Lynchburg, Va.	2	1	Wilmington, Del.	3	1
Lynn, Mass.	1		Wilmington, N. C.	2	
Marinette, Wis.	2		Worcester, Mass.	1	1

## TYPHUS FEVER.

## Texas—El Paso.

Acting Asst. Surg. Tappan reported August 25: A case of typhus fever was notified on August 22. The patient was a Mexican laborer.

## California Report for July, 1916.

During the month of July, 1916, three cases of typhus fever were reported in California.

## City Reports for Week Ended Aug. 12, 1916.

During the week ended August 12, 1916, one case of typhus fever was reported at New York, N. Y.

DIPHThERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

State Reports for July, 1916.

Place.	Cases reported.			Place.	Cases reported.		
	Diphtheria.	Measles.	Scarlet fever.		Diphtheria.	Measles.	Scarlet fever.
California.....	183	223	149	Mississippi.....	55	58	26
Indiana.....	81	781	114	Montana.....	25	88	16
Iowa.....	18	.....	28	New Jersey.....	391	.....	226
Kansas.....	63	297	64	Ohio.....	282	1,526	251
Louisiana.....	10	19	6	South Carolina.....	28	96	38
Maryland.....	66	546	87	Virginia.....	64	864	29
Michigan.....	322	370	160	Washington.....	14	819	29
Minnesota.....	125	314	98	Wyoming.....	2	12	2

City Reports for Week Ended Aug. 12, 1916.

City.	Popula- tion as of July 1, 1915 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Over 500,000 inhabitants:										
Baltimore, Md.....	584,605	211	10	2	5	4	.....	48	26	26
Boston, Mass.....	745,139	220	27	.....	40	2	.....	55	26	26
Chicago, Ill.....	2,447,045	772	84	7	39	1	19	1	199	61
Cleveland, Ohio.....	656,975	217	31	1	7	.....	6	1	27	17
Detroit, Mich.....	554,717	224	41	1	1	1	17	1	27	12
New York, N. Y.....	5,468,190	1,671	103	4	122	11	18	1	358	137
Philadelphia, Pa.....	1,683,664	579	35	4	28	.....	11	1	68	60
Pittsburgh, Pa.....	571,984	194	26	2	37	2	7	.....	14	7
St. Louis, Mo.....	745,988	216	9	.....	12	1	7	.....	32	12
From 300,000 to 500,000 inhabi- tants:										
Buffalo, N. Y.....	461,335	183	7	1	4	.....	1	.....	27	20
Cincinnati, Ohio.....	406,706	153	9	.....	2	.....	4	.....	30	25
Jersey City, N. J.....	300,133	91	6	.....	3	.....	3	.....	13	10
Los Angeles, Cal.....	465,367	108	4	.....	10	.....	3	.....	53	12
Milwaukee, Wis.....	428,062	78	3	.....	5	.....	18	.....	24	3
Minneapolis, Minn.....	353,460	.....	14	.....	8	.....	4	.....	.....	.....
Newark, N. J.....	399,000	168	9	.....	8	.....	7	.....	33	13
New Orleans, La.....	366,484	128	9	.....	20	.....	.....	.....	51	28
San Francisco, Cal.....	1,416,912	116	15	2	2	1	8	.....	37	17
Seattle, Wash.....	330,834	21	1	.....	5	.....	.....	.....	16	5
Washington, D. C.....	358,679	116	2	.....	15	.....	7	.....	22	10
From 200,000 to 300,000 inhabi- tants:										
Columbus, Ohio.....	209,722	70	2	.....	5	.....	2	.....	9	6
Denver, Colo.....	253,161	.....	2	.....	3	.....	.....	.....	.....	.....
Indianapolis, Ind.....	265,578	.....	2	.....	20	.....	1	.....	8	.....
Kansas City, Mo.....	289,879	63	7	.....	2	.....	2	.....	8	6
Portland, Oreg.....	272,833	45	1	.....	7	.....	4	.....	12	4
Providence, R. I.....	250,025	69	7	2	2	1	4	1	.....	8
Rochester, N. Y.....	250,747	62	5	1	10	.....	2	.....	17	5
St. Paul, Minn.....	241,999	36	6	.....	2	.....	.....	.....	16	2
From 100,000 to 200,000 inhabi- tants:										
Albany, N. Y.....	103,580	.....	1	.....	.....	.....	1	.....	11	.....
Birmingham, Ala.....	174,108	42	.....	.....	1	.....	2	.....	7	7
Bridgeport, Conn.....	118,434	39	1	.....	2	1	2	.....	4	2
Cambridge, Mass.....	111,669	.....	6	.....	8	.....	.....	.....	4	4
Camden, N. J.....	104,349	.....	4	.....	1	.....	1	.....	6	.....
Fall River, Mass.....	126,904	53	.....	.....	.....	.....	.....	.....	10	.....
Grand Rapids, Mich.....	125,759	24	.....	.....	.....	.....	1	.....	3	.....
Hartford, Conn.....	108,969	.....	1	.....	.....	.....	.....	.....	2	1
Lowell, Mass.....	112,124	35	.....	.....	12	.....	.....	.....	4	.....
Lynn, Mass.....	100,316	18	5	1	.....	.....	1	.....	5	4
Memphis, Tenn.....	146,113	.....	7	.....	.....	.....	3	.....	32	6
Nashville, Tenn.....	115,978	37	.....	.....	1	.....	1	.....	4	1
New Bedford, Mass.....	114,694	.....	2	.....	1	.....	2	.....	8	.....
New Haven, Conn.....	147,005	.....	2	.....	8	1	.....	.....	4	1
Omaha, Nebr.....	135,455	56	2	.....	.....	.....	.....	.....	.....	3

<sup>1</sup> Population Apr. 15, 1910; no estimate made.

## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Contd.

## City Reports for Week Ended Aug. 12, 1916—Continued.

City.	Population as of July 1, 1915 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 100,000 to 290,000 inhabitants—Continued.										
Reading, Pa.	105,094	29			1				4	
Richmond, Va.	154,674	69	1		1	1	11	6		
Salt Lake City, Utah.	113,567	24	3	1	5		2	1		
Springfield, Mass.	103,216	29	1	1	1		1	7	2	
Toledo, Ohio.	187,840	89	1		3	1	6	1	1	
Trenton, N. J.	109,212	39	1					8	3	
Worcester, Mass.	160,523				4	2				
From 50,000 to 100,000 inhabitants:										
Atlantic City, N. J.	55,806				1		1	3		
Bayonne, N. J.	67,582		2		1		2	2		
Berkeley, Cal.	54,879	8					4	1		
Binghampton, N. Y.	53,082	20	6		13		1			
Brockton, Mass.	65,746	16	2					1		
Canton, Ohio	59,139	11	3	1			1			
Charleston, S. C.	60,427	30				1			2	
Chattanooga, Tenn.	58,576	25	1				3		2	
Covington, Ky.	56,520	14	1		2				3	
Duluth, Minn.	91,913				1		1	3		
El Paso, Tex.	51,936	40	1						4	
Evansville, Ind.	72,125		1					1	2	
Flint, Mich.	52,159	17					4	1	1	
Fort Worth, Tex.	99,528	23						1		
Harrisburg, Pa.	70,754				2				1	
Hoboken, N. J.	76,101	23			1		1	9	2	
Johnstown, Pa.	66,585				1			1	1	
Lancaster, Pa.	50,269		1		2					
Lawrence, Mass.	98,197	26	2					5	5	
Little Rock, Ark.	55,158	18						1		
Malden, Mass.	50,067	8	5		2			2		
Manchester, N. H.	76,959	32	2							
Mobile, Ala.	56,536	26						2	2	
New Britain, Conn.	52,203				1		1	1	2	
Norfolk, Va.	88,076	35	1					4	4	
Oklahoma, Okla.	88,158	13					2	1	1	
Passaic, N. J.	69,010	19	1					1	1	
Pawtucket, R. I.	58,156	11								
Portland, Me.	63,014	19	2							
Rockford, Ill.	53,761	11	1						1	
Sacramento, Cal.	64,806	15					1			
Saginaw, Mich.	54,815	22					1	1		
St. Joseph, Mo.	83,974	23							4	
San Diego, Cal.	51,115	20	2	1	4			3	1	
Schenectady, N. Y.	95,265	8	1		1			4		
Somerville, Mass.	85,460	9	1		2			2	1	
South Bend, Ind.	67,030	11	3						1	
Springfield, Ill.	59,468	15	1							
Springfield, Ohio.	50,804	18						3		
Troy, N. Y.	77,738		1					1	2	
Wichita, Kans.	67,847						2			
Wilkes-Barre, Pa.	75,218	29	3				1	1		
Wilmington, Del.	93,161	28	1							
From 25,000 to 50,000 inhabitants:										
Alameda, Cal.	27,031	6							1	
Beaumont, Wash.	31,609	5						1	1	
Brookline, Mass.	31,934	2						2		
Butler, Pa.	26,587	10	1	1	2		3			
Butte, Mont.	42,918	22							6	
Chelsea, Mass.	32,452	11	1					2	1	
Chicopee, Mass.	28,688	11	2		1			1	2	
Columbia, S. C.	34,058	15						3	2	
Cumberland, Md.	25,564	6	1					2		
Danville, Ill.	31,554	8							1	
Davenport, Iowa.	47,127						1			
Dubuque, Iowa.	39,650							2	2	
East Orange, N. J.	41,155	7			2			2		
Elgin, Ill.	27,844	3								
Everett, Mass.	38,307	4			1				1	
Everett, Wash.	33,767	7								
Fitchburg, Mass.	41,144	6	6	1	7			1		

1 Population Apr. 10, 1915; no estimate made.

## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Contd.

## City Reports for Week Ended Aug. 12, 1916—Continued

City.	Popula- tion as of July 1, 1915 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 25,000 to 50,000 inhabit- ants—Continued.										
Galveston, Tex.	41,076	6							2	1
Hagerstown, Md.	25,233		2		12		2			
Haverhill, Mass.	47,774	13	1					2		1
Jackson, Mich.	34,730	8	1		1		2	1		
Kalamazoo, Mich.	47,364	3	3		3			6		2
Kenosha, Wis.	30,319	6	2					1		
La Crosse, Wis.	31,522	12								1
Lexington, Ky.	39,703	11	2		1		2			
Lincoln, Nebr.	46,028	11			1					
Long Beach, Cal.	26,012	14								
Lorain, Ohio.	35,662						1			
Lynchburg, Va.	32,385	7							2	1
Medford, Mass.	25,737	3						1		
Montclair, N. J.	25,550	2								
New Castle, Pa.	40,351								2	
Newport, Ky.	31,722	11								
Newport, R. I.	29,631	7								
Newton, Mass.	43,085	5			7				2	
Niagara Falls, N. Y.	36,240	20	4						8	
Norristown, Pa.	30,833	7							2	1
Ogden, Utah.	30,466	5	3		4					
Orange, N. J.	32,524				2					
Pasadena, Cal.	43,859	7							3	1
Perth Amboy, N. J.	39,725		1						1	
Pittsfield, Mass.	37,590	13					1		6	
Portsmouth, Va.	38,610	16	1							
Quincy, Ill.	36,764	18	2							1
Quincy, Mass.	37,251	1								
Roanoke, Va.	41,929		1				1		1	2
San Jose, Cal.	37,994	9	2				1			
Steuenville, Ohio.	26,631	11								
Stockton, Cal.	34,508		1						1	
Taunton, Mass.	35,957	19							1	
Topeka, Kans.	47,914	13	1						1	2
Waltham, Mass.	30,129	4							1	
Watertown, N. J.	29,384								1	1
West Hoboken, N. J.	41,893	6								1
Wheeling, W. Va.	43,097	9								1
Williamsport, Pa.	33,495		1						1	
Wilmington, N. C.	28,254	8								
Zanesville, Ohio.	30,406	9								
From 10,000 to 25,000 inhabit- ants:										
Beaver Falls, Pa.	13,316		1				1			
Braddock, Pa.	21,310	9							1	1
Cairo, Ill.	15,593	1								
Clinton, Mass.	13,075	2								
Concord, N. H.	22,480	3	1		1					
Galesburg, Ill.	23,923	5			1					
Harrison, N. J.	16,555				1				1	
Kearny, N. J.	22,733	10	1		4				1	
Kokomo, Ind.	29,312	7			1				1	1
Long Branch, N. J.	15,057	1	2							
Melrose, Mass.	17,166	3	1						3	
Morristown, N. J.	13,158	6	2	1						
Muscateine, Iowa.	17,287	2							2	
Nanticoke, Pa.	22,441	12	2						1	
Newburyport, Mass.	15,195	1			1					
New London, Conn.	20,771	7								
North Adams, Mass.	22,019	9								
Northampton, Mass.	19,846	11			8				3	1
Plainfield, N. J.	23,280	11					1		1	3
Rutland, Vt.	14,624	7	1		4		3			1
Sandusky, Ohio.	20,160				1					
Saratoga Springs, N. Y.	12,842	5					2			1
Stelton, Pa.	15,337	2	2						1	1

1 Population Apr. 15, 1910; no estimate made.

# FOREIGN.

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## CHINA.

### Examination of Rats—Shanghai.

During the two weeks ended July 22, 1916, 634 rats were examined at Shanghai. No plague infection was found.

The finding of the last plague-infected rat at Shanghai was reported for the week ended May 6, 1916.

### Plague-Infected Rats—Hongkong.

During the two weeks ended July 15, 1916, out of 3,930 rats examined at Hongkong, 4 were found plague infected.

## CURAÇAO.

### Quarantine Against Porto Rico.

According to information dated August 4, 1916, passengers and crews of vessels arriving from Porto Rico were being examined on arrival at Curaçao for evidence of recent vaccination and for the taking of temperature. Passengers were being allowed to land after giving names and addresses and were subject to daily medical examination.

## JAPAN.

### Cholera—Kobe—Osaka.

Under date of August 30, 1916, 46 cases of cholera were reported at Kobe and 353 at Osaka.

### Further Relative to Cholera—Nagasaki.<sup>1</sup>

Cholera was reported present at Nagasaki, August 8 to 18, 1916, with 262 cases.

## MEXICO.

### Typhus Fever—Vera Cruz—Zacatecas.

Typhus fever is reported prevalent at Vera Cruz and Zacatecas.

## SALVADOR.

### Poliomyelitis—San Salvador.

An outbreak of poliomyelitis was reported at San Salvador, August 21, 1916.

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<sup>1</sup> Public Health Reports, Aug. 18, 1916, p. 2229.

## VENEZUELA.

## Malaria—Mortality in 1915.

During the months of July, August, and September, 1915, 999 fatal cases of malaria were reported in Venezuela. During the month of October, 1915, 2,716 fatal cases were reported, the total number of deaths reported for that month from all causes being 5,549. The greatest prevalence of malaria in October, 1915, was in the State of Carabobo, with 207 fatal cases; population, 233,100.

## CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER.

Reports Received During the Week Ended Sept. 1, 1916.<sup>1</sup>

## CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
India:				
Akyab.....	June 11-17.....		1	
Bombay.....	July 1-15 <sup>2</sup> .....	13	7	
Calcutta.....	June 23-July 1.....		14	
Rangoon.....	do.....	1	1	
Indo-China:				
Saigon.....	June 18-July 2.....	52	36	
Japan:				
Kobe.....	Aug. 30.....	46		
Nagasaki.....	Aug. 8-18.....	262	107	
Osaka.....	Aug. 30.....	353		
Philippine Islands:				
Manila.....	July 1-15.....	23	7	
Provinces.....				July 1-15, 1916: Cases, 260; deaths, 173.
Albay.....	July 1-15.....	12	9	
Bulacan.....	do.....	114	77	
Camarines.....	do.....	92	56	
Cavite.....	do.....	5	1	
Laguna.....	do.....		1	
Pampanga.....	do.....	7	5	
Rizal.....	do.....	19	16	
Romblon.....	do.....	11	8	

## PLAGUE.

Ceylon:				
Colombo.....	July 2-8.....	12	12	
India:				June 25-July 1, 1916: Cases, 670; deaths, 461.
Bassorin.....	June 25-July 1.....		16	
Bombay.....	July 2-15.....	40	35	
Calcutta.....	June 25-July 1.....		2	
Benazada.....	do.....		1	
Karachi.....	July 2-15.....	1	3	
Pegu.....	June 25-July 1.....		1	
Rangoon.....	June 25-July 8.....	78	67	
Toungoo.....	June 25-July 1.....		2	
Indo-China:				
Saigon.....	June 19-July 2.....	10	6	
Japan:				
Taiwan—				
Tamsui.....	July 16-22.....	1	1	17 miles from capital city.

<sup>1</sup> From medical officers of the Public Health Service, American consuls, and other sources.

<sup>2</sup> On page 2291, Public Health Reports, Aug. 25, 1916, in table, under Cholera, Bombay, for "Aug. 19" read "June 25-July 1."

## CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER— Continued.

### Reports Received During Week Ended Sept. 1, 1916—Continued.

#### SMALLPOX.

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Austria-Hungary:</b>				
Austria.....				Apr. 23—May 20, 1916: Cases, 633.
Galicia, Province.....	Apr. 23—May 20.....	464		
Hungary— Budapest.....	June 25—July 8.....	2	2	
<b>China:</b>				
Hongkong.....	July 2—15.....	4	3	
Tientsin.....	June 25—July 8.....	4	2	
<b>France:</b>				
Paris.....	June 18—24.....	2		
<b>Great Britain:</b>				
Southampton.....	July 31—Aug. 5.....	1		
<b>Greece:</b>				
Athens.....	July 17—23.....			Present.
<b>India:</b>				
Bombay.....	July 1—15.....	17	11	
Rangoon.....	June 25—July 8.....	10	8	
<b>Mexico:</b>				
Aguascalientes.....	July 31—Aug. 13.....		6	
Vera Cruz.....	July 24—Aug. 6.....	1	1	
<b>Philippine Islands:</b>				
Manila.....	July 1—8.....	3		
<b>Porto Rico:</b>				
Arecibo.....	Aug. 7—13.....	1		
<b>Portugal:</b>				
Lisbon.....	July 9—22.....	5		
<b>Russia:</b>				
Moscow.....	June 25—July 1.....	14	7	
Petrograd.....	June 18—July 1.....	37	8	
Riga.....	July 1—22.....	2		Apr. 1—30, 1916, 1 case.
<b>Switzerland:</b>				
Basel.....	June 25—July 15.....	13		
<b>Turkey in Asia:</b>				
Jaffa.....	May 6—20.....			Present; many cases.
<b>Union of South Africa:</b>				
Natal— Durban.....	June 1—30.....	1		

#### TYPHUS FEVER.

<b>Austria-Hungary:</b>				
Austria.....				Apr. 22—May 20, 1916: Cases, 1,562.
Galicia, Province.....	Apr. 22—May 20.....	1,311		
Hungary— Budapest.....	July 2—8.....	1		
<b>Germany:</b>				
Berlin.....	July 16—22.....		2	May 21—27, 1916, 1 death.
Hanover.....	July 1—22.....	2		
Königsberg.....	July 23—29.....	1		
<b>Great Britain:</b>				
Belfast.....	July 30—Aug. 5.....	3	1	
Glasgow.....	July 23—29.....	5	2	
<b>Greece:</b>				
Saloniki.....	June 26—July 9.....		28	
<b>Mexico:</b>				
Aguascalientes.....	July 30—Aug. 13.....		29	
Vera Cruz.....	July 24—Aug. 6.....		2	
<b>Russia:</b>				
Moscow.....	June 25—July 1.....	42	5	
Petrograd.....	June 18—July 1.....	7	1	
<b>Sweden:</b>				
Stockholm.....	July 16—22.....	1		
<b>Switzerland:</b>				
Zurich.....	July 23—29.....	2		
<b>Turkey in Asia:</b>				
Adana.....	May 21—27.....			Prevalent.
Jaffa.....	May 6—20.....			Present; many cases.
Mersina.....	May 14—27.....	3		
Tarsus.....	.....do.....			Prevalent.

#### YELLOW FEVER.

<b>Mexico:</b>				
Morida.....	July 1—22.....	9	1	

**CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—**  
Continued.

**Reports Received from July 1 to Aug. 25, 1916.**

**CHOLERA.**

Place.	Date.	Cases.	Deaths.	Remarks.
Austria-Hungary.....				Mar. 12-May 6, 1916: Cases, 425; deaths, 155.
Austria.....	Mar. 26-Apr. 8.....	2		
Bosnia-Herzegovina.....	Mar. 12-Apr. 29.....	397	147	
Hungary.....	Mar. 20-Apr. 2.....	2		
Ceylon:				
Colombo.....	June 25-July 1.....	1	1	May 7-20, 1916: Cases, 43; deaths, 5. From s. s. Hong Kheng from Haifong. Total to June 1: Cases, 61; deaths, 37. May 28-June 10, 1916: Cases, 19; from the port.
China:				
Hongkong.....	Aug. 19.....			Present.
Egypt:				
Suez.....	May 18-20.....	5	2	From s. s. Pei-ho from Bombay.
Tor, quarantine station.....	May 22-June 3.....	112	42	Do.
India:				
Bassein.....	Apr. 23-June 10.....		3	
Bombay.....	May 14-July 1.....	21	9	
Calcutta.....	May 7-June 24.....		245	
Benzada.....	Apr. 23-June 17.....		6	
Madras.....	June 25-July 1.....	1	1	
Pegu.....	June 4-10.....		1	
Rangoon.....	May 21-June 24.....	11	7	
Indo-China.....				Dec. 1-31, 1915: Cases, 510; deaths, 395; Jan. 1-Feb. 29, 1916: Cases, 1,332; deaths, 762.
Provinces—				
Anam.....	Dec. 1-31.....	493	388	
Do.....	Jan. 1-Feb. 29.....	1,295	738	
Cambodia.....	do.....	11	10	
Cochin-China.....	do.....	6	1	
Tonkin.....	Dec. 1-31.....	17	7	
Do.....	Jan. 1-Feb. 29.....	20	13	
Saigon.....	May 1-June 18.....	110	28	
Japan:				
Nagasaki.....	Aug. 7-11.....	18	18	
Yokohama.....	Aug. 15.....	1		55 cases; with 9 deaths in quarantine.
Java.....				East Java, Apr. 8-May 19, 1916: Cases, 7; deaths, 4. West Java, Apr. 3-June 1, 1916: Cases, 69; deaths, 56.
Batavia.....	Apr. 13-June 1.....		79	
Malang.....	Apr. 8-14.....	2	2	
Malang and Djombang.....	Apr. 28-May 5.....	2	2	
Surabaya residency.....	May 6-19.....	5	2	Including Malang, 2 cases, and Sidoarjo and Malang, 3 cases with 2 deaths.
Persia:				
Asterabad.....	June 10.....			Present with 4 or 5 deaths daily.
Foumen.....	May 9.....	3	2	Previously erroneously included in cases at Reht.
Ghazian.....	June 13.....	2	1	
Mohammerah.....	June 12.....			Present.
Philippine Islands:				
Manila.....	May 14-July 1.....	36	25	Not previously reported: Cases, 8; deaths, 1.
Provinces—				
Albay.....	July 2-8.....	15	8	
Bataan.....	do.....	2	2	
Bulacan.....	June 18-July 1.....	17	4	
Do.....	July 2-8.....	53	30	
Cagayan.....	June 25-July 1.....	2	1	
Do.....	July 2-8.....	2		
Camarines.....	June 18-July 1.....	69	32	
Do.....	July 2-8.....	51	29	
Cavite.....	June 11-July 1.....	14	11	
Laguna.....	May 21-July 1.....	31	20	
Do.....	July 2-8.....	2	1	
Rizal.....	May 21-July 1.....	11	9	
Do.....	July 2-8.....	12	4	
Romblon.....	June 18-July 1.....	68	39	
Tayabas.....	June 10-24.....	11	8	
Siam:				
Bangkok.....	May 15-27.....	22	21	
Straits Settlements				
Singapore.....	May 27-June 24.....	8	3	
Turkey in Europe:				
Constantinople.....	May 19-June 15.....	53	29	Present among soldiers June 14.
Smyrna.....	To June 14.....			Epidemic. Estimated number cases daily, 50.

## CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER— Continued.

### Reports Received from July 1 to Aug. 25, 1916—Continued.

#### CHOLERA—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Turkey in Asia:				
Bagdad.....	June 27.....			Present.
At sea:				
Steamship Hong-Kheng....	Apr. 27-May 9....	17	14	En route from Haifong, Indo-China, to Colombo.
Steamship Pei-ho.....	Apr. 19-30.....	1	1	From Saigon, Indo-China, for Colombo.
Do.....	May 5-17.....	8	8	From Colombo for Suez.

#### PLAGUE.

Ceylon:				
Colombo.....	Apr. 30-July 1....	49	46	
Chile:				
Mejillones.....	May 28-June 3....	1		
Antofagasta.....	June 4-July 22....		2	
China:				
Hongkong.....	May 28-June 17....	6	6	
Ecuador:				
Ambato.....	May 1-31.....			Epidemic.
Bahia.....	do.....			Country district, vicinity of
Daule.....	June 1-30.....	4	2	Bahia.
Guayaquil.....	May 1-June 30....	10	3	
Manta.....	May 1-31.....			Country district, vicinity of
Egypt:				
Alexandria.....	May 26-July 19....	34	21	Jan. 1-July 20, 1916: Cases, 1,675; deaths, 816.
Cairo.....	July 10.....	1		Imported.
Port Said.....	May 28-June 28....	8	5	
Do.....	July 20.....	3	2	
Provinces—				
Assiout.....	May 27-June 29....	9	8	
Beni-Souef.....	May 23-June 25....	34	15	
Do.....	July 1-10.....	2	1	
Fayoum.....	May 26-June 30....	112	45	
Do.....	July 1-19.....	7	2	
Galioubeh.....	June 7.....	1		
Girgeh.....	June 9-21.....	3	1	
Do.....	July 7-10.....	7	7	
Menoufieh.....	June 12-30.....	9	4	
Do.....	July 1-17.....	3	2	
Minieh.....	May 29-June 30....	37	14	
Do.....	July 3-10.....	5	2	
Great Britain:				
Bristol.....	Aug. 18.....	1		
India:				
Bassein.....	Apr. 23-June 17....		185	May 7-June 24, 1916: Cases, 2,894; deaths, 2,217. <sup>1</sup>
Bombay.....	May 14-July 1....	290	284	
Calcutta.....	May 7-June 24....		12	
Henzada.....	Apr. 23-June 17....		13	
Karachi.....	May 14-July 1....	72	61	
Madras Presidency.....	May 14-June 24....	139	94	
Mandalay.....	May 14-June 3....		1	
Moulmein.....	Apr. 23-June 10....		37	
Pegu.....	June 11-17.....		1	
Promé.....	Apr. 23-May 20....		1	
Rangoon.....	Apr. 23-June 24....	428	406	Apr. 16-22, 1916: Cases, 54; deaths, 52.
Indo-China:				
Provinces—				Dec. 1-31, 1915: Cases, 90; deaths, 70. Jan. 1-Feb. 29, 1916: Cases, 205; deaths, 153.
Anam.....	Dec. 1-31.....	36	20	
Do.....	Jan. 1-Feb. 29....	79	62	
Cambodia.....	Dec. 1-31.....	27	36	
Do.....	Jan. 1-Feb. 29....	77	71	
Cochin China.....	Dec. 1-31.....	4	1	
Do.....	Jan. 1-Feb. 29....	49	20	
Tonkin.....	Dec. 1-31.....	23	23	
Saigon.....	May 15-June 18....	45	24	

<sup>1</sup> Reports for weeks ended May 20 and 27, 1916, not received.

## CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER— Continued.

Reports Received from July 1 to Aug. 25, 1916—Continued.

### PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Java:</b>				
Residences—				
Kediri.....	Apr. 9-May 19....	18	18	Including Surabaya city and district.
Paseroean.....	.....do.....	7	6	
Surabaya.....	.....do.....	23	21	
Surakarta.....	.....do.....	15	24	
Mauritius.....	Apr. 15.....	5	8	
<b>Persia:</b>				
Recht.....	May 2-19.....	20	14	
<b>Siam:</b>				
Bangkok.....	Apr. 30-June 17..	50	45	
<b>Straits Settlements:</b>				
Singapore.....	Apr. 30-June 24..	4	1	
<b>Union of South Africa:</b>				
Orange Free State.....	Jan. 23-Mar. 26..	36	23	Remaining under treatment Mar. 26, 6 cases.

### SMALLPOX.

<b>Australia:</b>				
New South Wales—				
Guildford.....	June 9-22.....	2	.....	
Narrabri.....	May 26-June 7..	8	.....	
Sydney.....	June 23-July 6..	4	.....	
Tamworth.....	June 9-22.....	1	.....	
<b>Austria-Hungary:</b>				
Austria.....				
Prague.....	July 2-8.....	1	.....	Feb. 13-19, 1916: Cases, 1,539.
Vienna.....	May 27-July 1..	4	1	
Hungary—				
Budapest.....	May 21-June 24..	36	14	
<b>Brazil:</b>				
Bahia.....	July 2-8.....	1	1	
Para.....	.....do.....	.....	4	
Rio de Janeiro.....	Apr. 9-June 17..	94	18	
Santos.....	May 8-14.....	.....	1	
<b>Canada:</b>				
Ontario—				
Fort William and Port Arthur.....				
Arthur.....	July 9-15.....	1	.....	
Niagara Falls.....	July 2-8.....	1	.....	
Toronto.....	June 25-July 29..	3	.....	
<b>Ceylon:</b>				
Colombo.....	May 7-June 3..	4	.....	Cases May 29-June 3 from the port.
<b>China:</b>				
Antung.....	May 22-June 18..	2	1	
Dairen.....	May 21-July 1..	2	1	
Chungking.....	May 7-June 21..	.....	.....	Present.
Foochow.....	May 7-27.....	.....	.....	Do.
Harbin.....	May 2-11.....	2	1	
Hongkong.....	May 7-June 24..	68	50	
Nanking.....	June 11-17.....	.....	.....	Do.
Tientsin.....	May 14-June 24..	43	10	
<b>East Africa:</b>				
Mombasa.....	Apr. 24-30.....	3	1	
<b>Egypt:</b>				
Alexandria.....	May 28-June 17..	4	2	
Cairo.....	Jan. 22-Mar. 11..	13	1	
<b>France:</b>				
Paris.....	May 14-June 3..	6	.....	
<b>Germany:</b>				
Breslau.....	May 21-27.....	1	.....	
Hamburg.....	June 11-17.....	1	.....	
Königsberg.....	July 2-8.....	3	.....	
<b>Great Britain:</b>				
Cardiff.....	June 4-17.....	1	1	
London.....	.....do.....	1	.....	
<b>Greece:</b>				
Athens.....	Apr. 1-June 13..	178	37	
<b>India:</b>				
Bassein.....	May 7-June 10..	.....	2	
Bombay.....	May 14-July 1..	153	79	
Calcutta.....	May 7-June 3..	.....	3	
Madras.....	May 14-July 1..	139	42	
Rangoon.....	Apr. 23-June 24..	253	131	

**CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—  
Continued.**

**Reports Received from July 1 to Aug. 25, 1916—Continued.**

**SMALLPOX—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
Indo-China.....				Dec. 1-31, 1915: Cases, 74; deaths, 14. Jan. 1-Feb. 29, 1916: Cases, 134; deaths, 16.
Provinces—				
Anam.....	Dec. 1-31	48		
Do.....	Jan. 1-Feb. 29	24		
Cambodia.....	Dec. 1-31	19	13	
Do.....	Jan. 1-Feb. 29	37	14	
Cochin China.....	Dec. 1-31	1	1	
Do.....	Feb. 1-29	10		
Tonkin.....	Dec. 1-31	6		
Do.....	Jan. 1-Feb. 29	63	2	
Japan:				
Kobe.....	May 29-June 25	24	4	
Nagasaki.....	June 26-July 2	1	1	
Java.....				East Java, Apr. 9-May 19: Cases, 13; deaths, 8. Mid-Java, Apr. 1-May 19, 1916: Cases, 148; deaths, 18. West Java, Apr. 13-June 1, 1916: Cases, 141; deaths, 28.
Batavia.....	Apr. 13-June 1	9	5	
Blora and Malang.....	May 13-19	4	1	
Kraksan and Soemenap.....	May 6-12	2		
Samarang.....	May 13-19	2		
Sittobondo.....	Apr. 8-14	1	1	
Surabaya.....	May 6-19	2	1	
Toeban and Bosjonegoro.....	Apr. 8-14	6	6	
Malta.....	Apr. 1-30	7	1	
Mexico:				
Aguascalientes.....	June 12-July 30		53	
Frontera.....	May 28-June 10	4	1	
Guadalajara.....	June 11-17	35	9	
Mazatlan.....	May 31-June 6		4	
Tenosique.....	June 14			175 miles south of Frontera. Epidemic among troops.
Vera Cruz.....	June 4-July 23	6	11	
Netherlands:				
Amsterdam.....	May 28-June 3	1		
Philippine Islands:				
Manila.....	do.	1		
Porto Rico.....				June 19-25, 1916: Cases, 33.
Aguas Buenas.....	June 19-25	5		
Arecibo.....	do.	2		
Bayamon.....	June 19-July 2	2		
Naranjito.....	June 26-July 2	4		
Rio Piedras.....	do.	1		
San Juan.....	do.	24		
Toa Alta.....	do.	12		
Portugal:				
Lisbon.....	May 21-July 1	15		
Russia:				
Moscow.....	Apr. 30-June 16	208	52	
Riga.....	Apr. 6-12	1		
Petrograd.....	Apr. 23-May 27	125	27	
Siam:				
Bangkok.....	May 24-30	2		
Spain:				
Madrid.....	May 1-31		13	June 1-30, 1916: Cases, 10.
Valencia.....	May 21-July 1	12	4	
Do.....	July 8-22	5		
Straits Settlements:				
Penang.....	May 14-20	3		
Singapore.....	Apr. 30-May 27	4	3	
Switzerland:				
Basel.....	May 13-June 17	25		
Union of South Africa:				
Johannesburg.....	May 28-June 3	1		
At sea:				
Steamship Katuna.....				Case of smallpox landed at Colombo, Ceylon, May 12, 1916. Vessel arrived May 27 at Fremantle, Australia, was ordered into quarantine, and proceeded to Melbourne direct for disinfection.

**CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—**  
Continued.

**Reports Received from July 1 to Aug. 25, 1916—Continued.**

**TYPHUS FEVER.**

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Austria-Hungary:</b>				
Austria.....				Feb. 13-26, 1916: Cases, 845.
Vienna.....	July 2-8.....	1		
Hungary.....				Feb. 21-Mar. 5, 1916: Cases, 35;
Budapest.....	May 21-June 21.....	14	2	deaths, 7.
<b>Canada:</b>				
New Brunswick—				
St. John.....	July 29.....	4		
<b>China:</b>				
Antung.....	June 19-July 2.....	1	1	
Harbin.....	May 2-8.....	1		
Tientsin.....	May 14-20.....		1	
<b>Egypt:</b>				
Alexandria.....	May 21-July 1.....	235	93	
Do.....	July 2-8.....	37	13	
Cairo.....	Jan. 8-Mar. 11.....	76	35	
<b>Germany:</b>				
Aix la Chapelle.....	July 2-8.....		1	
Berlin.....	June 18-24.....		1	
Bremen.....	do.....	1		
Chemnitz.....	May 28-June 3.....		1	
Frankfort on Main.....	June 11-17.....		1	
Hanover.....	May 7-20.....	4		
Königsberg.....	June 4-10.....	1		
Do.....	July 9-22.....	4		
Leipzig.....	June 4-10.....		1	
Stettin.....	July 16-22.....		1	
<b>Great Britain:</b>				
Belfast.....	July 16-29.....	4	1	
Glasgow.....	July 9-22.....	2	3	
<b>Greece:</b>				
Saloniki.....	May 1-June 25.....		45	
<b>Italy:</b>				
Palermo.....	June 29-July 5.....	1	1	
<b>Japan:</b>				
Tokyo.....	May 22-July 2.....	110		Jan. 1-July 2, 1916: Cases, 462.
<b>Java:</b>				East Java, Apr. 8-May 24, 1916:
Batavia.....	Apr. 13-June 1.....	34	10	Cases, 20; deaths, 9. Mid-Java,
Samarang.....	Apr. 1-May 19.....	13	4	Apr. 1-19, 1916: Cases, 44;
Surabaya.....	Apr. 8-May 12.....	6	6	deaths, 9. West Java, Apr. 13-
				June 1, 1916: Cases, 68; deaths,
				15.
<b>Mexico:</b>				
Aguascalientes.....	June 12-July 30.....		75	
Guadalajara.....	June 11-17.....	4	1	
Vera Cruz.....	June 4-9.....		2	
<b>Russia:</b>				
Moscow.....	Apr. 30-June 17.....	867	47	
Petrograd.....	Apr. 23-June 10.....	22	5	
<b>Sweden:</b>				
Stockholm.....	June 21-27.....	1		
Do.....	July 9-15.....	2		
<b>Switzerland:</b>				
Geneva.....	May 21-27.....	1		
<b>Turkey in Asia:</b>				
Adana.....	May 13.....			Present.
Bagdad.....	June 27.....			Do.
Haifa.....	Apr. 24-30.....	5	1	
Jaffa.....	Apr. 23-June 3.....		15	Mar. 19-Apr. 1, 1916: Present.
Mersina.....	May 7-13.....	5		Apr. 2-8, 1916: Cases, 3.
Tarsus.....	May 13.....			Present.

**YELLOW FEVER.**

<b>Ecuador:</b>				
Bahahoyo.....	June 1-30.....	2		
Guayaquil.....	May 1-June 30.....	76	51	
Milagro.....	June 1-30.....	1	1	
<b>Mexico:</b>				
Merida.....	July 19-22.....	8		
Progreso.....	Aug. 13.....	1	1	

# SANITARY LEGISLATION.

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## COURT DECISIONS.

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### MICHIGAN SUPREME COURT.

#### Workmen's Compensation—A Hernia May be an "Accidental Injury" Under the Michigan Law.

ROBBINS v. ORIGINAL GAS ENGINE CO. ET AL. (Mar. 31, 1916.)

The Michigan workmen's compensation law does not provide for compensation for all personal injuries suffered by an employee, but for accidental injuries only.

A hernia which was discovered soon after a severe strain caused by lifting was held by the court to be an accidental injury within the meaning of the Michigan workmen's compensation law.

[157 Northwestern Reporter, 437.]

OSTRANDER, J.: It is the contention of respondents, plaintiffs in certiorari, that the testimony fails to prove accidental injury. The testimony introduced on the part of claimant tended to prove that on January 22, 1915, while he assisted another in moving a gasoline engine weighing some 600 pounds, he suddenly had pain in his left groin, noticed a small swelling in the groin that night, consulted a physician, was advised that he had a hernia, and was operated upon for hernia. His claim is for compensation for time lost from February 6, 1915, to April 5, 1915, for medical attendance, hospital and ambulance fees, a total of \$167.08. This amount was allowed by arbitrators, and, upon appeal, the allowance was affirmed.

Claimant had worked for the Original Gas Engine Co. for about nine years, painting gasoline engines. For three years the conditions under which he worked and the method of doing the work were the same.

\* \* \* \* \*

The history of the particular case excludes the idea of the use, with violence, of an instrument, or substance, puncturing or rendering the abdominal wall.

A physician, the one first consulted by claimant, testified that in his opinion the hernia was caused by the strain in moving the engine. He further testified that when he first examined claimant he was able to reduce the hernia with his finger; that there were no adhesions. In these circumstances he found support for his conclusion that this was a new and not an old hernia. The surgeon who operated upon claimant testified that in his opinion the hernia was produced by the exertion described by claimant. All the experts seem to agree that the visible evidence of the hernia is the protrusion through the inguinal ring of the peritoneum and its contents; "the hernia is the peritoneum going through, accompanied by the intestines or some other substance."

But the testimony for respondents is to the effect that the peritoneum is incapable of sudden, and is capable of very gradual, extension; that the sudden complete development of hernia in a pathological sense is impossible, but the hernia may be felt—the sudden projection of hernial contents into the preformed sac—for the first

time during a straining effort. Various medical authorities to which the court is referred appear to sustain the proposition that hernia is of slow formation and can never arise from a single augmentation of intra-abdominal tension, however great it may be. It may be said that the testimony of claimant's experts does not deny this proposition; that they regarded the condition which they found—the condition they undertook to relieve—as caused by the strain and exertion of the claimant. They found a hernia, a protrusion, to be reduced, and found cause for it in the described strain and exertion of claimant.

The Michigan law does not award compensation for all personal injuries suffered by an employee, but for accidental injuries only. *Adams v. Acme White Lead, etc., Works*, 182 Mich. 157, 148 N. W. 485. [Pub. Health Rep. Reprint 342, p. 82.] The vital question which the Industrial Accident Board had to determine was not whether on January 22, 1915, it was discovered that claimant had hernia, but was whether claimant on that day suffered an accidental injury, arising out of and in the course of his employment. Accepting respondents' proposition as true, it may be said that upon the occasion in question, by reason of a strain or effort of claimant in performing his duties, an undiscovered and undiscoverable but previously formed sac was pushed through the left inguinal ring and muscles. So much injury claimant then and there suffered, to alleviate, if not to cure, which medical attention and treatment were required. It is compensation for that injury which is claimed and was allowed. Was it an accidental injury within the meaning of the law? It has been said of the expressions "accident" and "accidental," employed in an act having a purpose similar to ours, that they were used with their popular and ordinary meaning: Happening by chance; unexpectedly taking place; not according to the usual course of things; or not as expected.

If a result is such as follows from ordinary means, voluntarily employed, in a not unusual or unexpected way, it can not be called a result effected by accidental means, \* \* \* but that if, in the act which precedes the injury, something unforeseen, unexpected, unusual occurs which produces the injury, then the injury has resulted through accidental means. *U. S. Mut. Accident Ass'n v. Barry*, 131 U. S. 100, 121, 9 Sup. Ct. 753, 762 (34 L. Ed. 60).

This is a case relied upon by respondents.

It has been held that death resulting from a ruptured artery was not accidental when the rupture occurred while the insured was reaching from a chair to close a window, did not slip or fall or lose his balance, and nothing unforeseen occurred except the bursting of the artery. *Feder v. Iowa State Trav. Men's Ass'n*, 107 Iowa, 538, 78 N. W. 252, 43 L. R. A. 693, 70 Am. St. Rep. 212. An examination of cases arising principally upon accident-insurance policies, some of which are collected in a note to *Lehman v. Great Western Acci. Ass'n*, 42 L. R. A. (N. S.) 562, discloses that in the opinions which seem to be best considered the distinction is observed between the means by which an injury is produced and the result of the producing cause or causes. It is not sufficient that there be an unusual and unanticipated result; the means must be accidental—involuntary and unintended. There must, too, be some proximate connection between accidental means and the injurious result. It is doubtful, however, if in applying our statute, its general purpose being considered, the court should exactly follow the rules suggested and applied in the cases referred to. The statute seems to contemplate that an accidental injury may result by mere mischance; that accidental injuries may be due to carelessness, not willful, to fatigue, and to miscalculation of the effects of voluntary action. There is testimony in the record, although it is not very conclusive, to support a finding that claimant was suddenly and accidentally put at disadvantage by the act of his fellow workman and the sticking of the engine on the concrete floor, and that the rupture and immediate protrusion of the abdominal sac were caused by his efforts to retrieve his position and do his work. It is assumed that it was the first time the sac had been forced through the abdominal wall. If it is also assumed that there was a certain lack of

physical integrity in the parts where the injury was manifested, still I think claimant may have compensation for the injury he suffered. I decide only the particular case, and in doing so decline to hold, upon this record, that claimant suffered from disease and not from accidental injury. See *Grove v. Michigan Paper Co.*, 184 Mich. 449, 151 N. W. 554.

### MASSACHUSETTS SUPREME JUDICIAL COURT.

#### Shellfish From Contaminated Waters—Taking Prohibited—Massachusetts Law Upheld.

COMMONWEALTH *v.* FEENEY. (May 22, 1915.)

A Massachusetts law prohibited the taking of shellfish from waters which had been declared by the State board of health to be contaminated by sewage or otherwise. The court decided that the law was constitutional and valid.

The defendant was charged under Massachusetts R. L. (ch. 91, secs. 113, 114) with taking clams from flats in the city of Boston from which the taking of clams was prohibited by the commissioners on fisheries and game at the request in writing of the State board of health.

Section 113 referred to above reads as follows:

The State board of health may examine all complaints which may be brought to its notice relative to the contamination of tidal waters and flats in this Commonwealth by sewage or other causes, may determine, as nearly as may be, the bounds of such contamination, and if necessary mark such bounds. It may also in writing request the commissioners on fisheries and game to prohibit the taking from such contaminated waters and flats of any oysters, clams, quahogs, and scallops. Upon receipt of such request said commissioners shall prohibit the taking of such shellfish from such contaminated waters or flats for such period of time as the State board of health may prescribe.

[221 Massachusetts Reports, 323; 108 Northeastern Reporter, 1068.]

BRALEY, J. The facts not being in controversy, the question of the defendant's guilt or innocence depends upon the validity and meaning of R. L. c. 91, secs. 113, 114. The general right of the inhabitants from the earliest times to take within the flats and tidal waters of the Commonwealth, shellfish for the use of their families, while made subject to legislative regulations as to quantity, has never been denied. *Dill v. Wareham*, 7 Metc., 438, 446, 447; *Com. v. Bailey*, 13 Allen, 541; *Williams v. Delano*, 155 Mass., 10; 28 N. E. 1122; R. L. c. 91, secs. 100, 101, 102. But when, in the course of time, the density of population had so increased that certain portions of such waters and flats became impregnated with sewage or deleterious substances from manufacturing establishments, which affected and poisoned the imbedded shellfish, the legislature apparently for the protection and preservation of the public health enacted St. 1901, c. 138, now R. L. c. 91, sec. 113, authorizing the State board of health, upon complaint, to delimit the contaminated area, and authorizing the board to request, in writing, the commissioners on fisheries and game to prohibit the taking therefrom of oysters, clams, quahogs, and scallops. The commissioners upon receiving the request are required to prohibit the taking of shellfish from the waters thus designated during such period of time as the board shall have prescribed, although by St. 1907, c. 285, clams and quahogs may be taken for bait only, by any person having a permit in writing from the local board of health. See also St. 1911, c. 411, sec. 10. By section 114, upon the issuance and publication of the order of prohibition, its violation is made a misdemeanor punishable by fine. The statute is a valid exercise of the authority given by part 2, c. 1, sec. 4, of the constitution, to enact "all manner of wholesome and reasonable orders, laws, statutes, and ordinances," even if legislative functions to determine whether the conditions referred to in the statute exist, are conferred upon the State board of health, without giving to parties who may be interested an opportunity to appear and be heard. *Com. v. Sisson*, 189 Mass., 247, 252; 75 N. E. 619. 1 L. R. A. (N. S.) 752; 109 Am. St. Rep., 630.

But the defendant contends that, as the order which must define not only the location of the prohibited territory, but the duration of the prohibition, is dependent upon the terms of the "request," the order for the violation of which he has been convicted is void because the request is unlimited in time. The "period of time" is to be defined in connection with the subject matter and purpose of the statute, the wording of which assumes that the contamination ultimately may cease and the fishery may be safely resumed. It being impossible except from observation and experience to determine when this condition will appear, the board is only required to name definitely the date from which the prohibition is to begin, although it may remain in force until the board are satisfied that its continuance is no longer necessary. It, moreover, is only when the defendant has been deprived arbitrarily of taking uncontaminated shellfish for the sustenance of his family that he can complain of an invasion of his constitutional rights. The proceedings shown by the record having been in conformity with the statute, the defendant's first four requests were properly denied, and the fifth not having been argued is to be treated as waived. By the terms of the report the verdict is to stand, and it is so ordered.

## STATE LAWS AND REGULATIONS PERTAINING TO PUBLIC HEALTH.

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### MONTANA.

#### **Poliomyelitis — Notification of Cases — Quarantine — Disinfection — Funerals— Employment of Nurses. (Reg. Bd. of H., July 22, 1916.)**

REG. 30. Any local or county health officer having knowledge of, or having reason to suspect the presence of poliomyelitis (infantile paralysis) within his district shall immediately investigate, if necessary, and shall at once place under quarantine all persons found suffering from such disease.

Patients suffering from poliomyelitis (infantile paralysis) shall be effectively screened against flies, and all discharges from such patients shall be properly disposed of.

Quarantine for poliomyelitis (infantile paralysis) shall be absolute, and shall extend for a period of at least six weeks, and as much longer as the local or county health officer may deem necessary. On recovery or death of a patient, the house occupied by such patient shall be thoroughly fumigated and cleansed.

Funerals of persons dead of poliomyelitis (infantile paralysis) shall be strictly private.

As soon as a diagnosis is made the attending physician shall report all cases of poliomyelitis (infantile paralysis) by the quickest possible method to the local or county health officer within whose jurisdiction such cases occur. The local or county health officer shall report to the secretary of the State board of health by wire or telephone as soon as any case of poliomyelitis (infantile paralysis) is reported to him, or as soon as he himself has made such a diagnosis on any case he has attended.

REG. 31. When an epidemic of poliomyelitis (infantile paralysis) occurs in any county in this State, the county board of health of such county shall employ at the expense of said county a duly trained and registered nurse as a public health nurse, who shall act in cooperation with the county health officer and under the direction of the State board of health.

## MUNICIPAL ORDINANCES, RULES, AND REGULATIONS PERTAINING TO PUBLIC HEALTH.

### ALAMEDA, CAL.

#### Milk and Milk Products—Sale of. (Ord. 73, N. S., July 25, 1916.)

SECTION 1. The terms "milk" and "milk products," as used in this ordinance, shall be construed to mean and include whole milk, skimmed milk, buttermilk, sour milk, whey, and cream, when intended for human consumption.

SEC. 2. It shall be unlawful for any person, firm, or corporation to offer for sale, expose for sale, sell, deliver, or distribute, in the city of Alameda any such milk or milk products (except such as may be given, furnished, or sold for consumption upon the premises where the same shall have been given, furnished, or sold) in quantities of less than 1 gallon, unless the same be kept and contained and offered for sale, exposed for sale, sold, delivered, or distributed in sterilized transparent glass bottles, which said bottles shall have been closed or sealed, as herein provided, with a suitable cap, cover, or stopper immediately after the filling of the same.

SEC. 3. It shall be unlawful for any person, firm, or corporation to pour or transfer into any receptacle such milk or milk products intended or designated to be offered for sale, exposed for sale, sold, delivered, or distributed in such receptacle in the city of Alameda, unless the act of pouring or transferring the same be performed in a milk house or creamery of which the sanitary condition shall have been first duly approved by the board of health of said city: *Provided, however,* That the provision of this section shall not be construed as applying to any person who shall have such milk or milk products in his possession for use or consumption and not for sale or distribution.

SEC. 4. It shall be unlawful for any person, firm, or corporation to expose for sale, offer for sale, sell, deliver, or distribute within the city of Alameda, any such milk or milk products in glass bottles, unless each bottle in which such milk or milk products is contained shall have blown therein or etched thereon the name of the person, firm, or corporation bottling the same, or the trade name or designation under which said person, firm, or corporation conducts business, and unless the cap, cover, or stopper of each bottle shall have indelibly indicated thereon, in a legible and conspicuous manner, the name of said person, firm, or corporation bottling said milk or milk products, or the trade-mark or designation under which such person, firm, or corporation conducts business. And in any prosecution for violation of the terms of this ordinance, the fact that the name of a person, firm, or corporation, or the trade name or designation under which such person, firm, or corporation conducts business, appears upon any such bottle containing said milk or milk products and upon the cap thereof, shall constitute prima facie evidence that the milk therein contained was placed therein by the person, firm, or corporation whose name or trade name or designation appears thereon.

SEC. 5. It shall be unlawful for any person, firm, or corporation to offer for sale, expose for sale, sell, deliver, or distribute in the city of Alameda any such milk or milk products in any glass bottle, unless the name appearing on such bottle, as provided by section 4 of this ordinance, be identical with the name appearing upon the cap, cover, or stopper of such bottle, as provided in said section 4.

SEC. 6. It shall be unlawful for any person, firm, or corporation, either as principal or as agent, employee or servant, to offer for sale, expose for sale, sell, deliver, or distribute any such milk or milk products, in quantities of 1 gallon or more, unless the same be contained in a suitable sterile receptacle, sealed or locked with chain, or wire, or other seal or contrivance sufficient to prevent the opening of such receptacle without breaking or unfastening such seal or contrivance: *Provided, however,* That persons, firms, or corporations engaging in the wholesale delivery or sale of such milk or milk products may sell or deliver the same from sterilized unsealed or unlocked cans or receptacles, but in such case said cans or receptacles shall be tightly covered and contain no perforation either in the container or its cover, and there shall be conspicuously displayed on each of said cans or receptacles, in plain legible letters not less than 2 inches in height, the word "wholesale."

SEC. 7. It shall be unlawful for any person, firm, or corporation, either as principal or as agent, employee, or servant (except as specially excepted in section 3 of this ordinance) to transfer or pour any such milk or milk products from one receptacle of whatever kind to any other receptacle whatever on any street, lane, alley, thoroughfare, square, or public place in the city of Alameda, or any other uninclosed place in said city, or in any place whatever except a milk house or creamery of which the sanitary condition shall have been first duly approved by the board of health.

SEC. 8. Any person violating any of the provisions of this ordinance shall be guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not more than \$100, or by imprisonment in the city prison for a period not exceeding 10 days, or by both such fine and imprisonment.

SEC. 9. All ordinances and parts of ordinances in conflict herewith, in so far as the same so conflict, are hereby repealed.

SEC. 10. This ordinance shall take effect and be in force on and after October 1, 1916.

### **Pasteurized Milk—Production, Care, and Sale. (Ord. 74, N. S., July 25, 1916.)**

SECTION 1. Pasteurized milk is hereby defined to be milk of which every portion has been heated to a temperature of 140° F., and not to exceed 145°, and maintained at that temperature for the period of 30 minutes consecutively, and thereafter immediately cooled to a temperature not higher than 45° F.

SEC. 2. From and after the date this ordinance takes effect, no person shall expose for sale, or sell, or deliver for sale or consumption, within the city of Alameda, any pasteurized milk, without first obtaining a permit therefor from the board of health of said city, as herein provided, and conforming with all of the provisions of this ordinance.

SEC. 3. Any person desiring a permit to expose for sale, or sell, or deliver for sale or consumption, any pasteurized milk, shall first make application therefor to the board of health, upon blanks provided for the purpose, stating the name and residence of the applicant and the exact location of the machine or apparatus to be used by him in pasteurizing such milk, which said application shall be signed by the applicant and filed in the office of the board of health.

SEC. 4. Upon receipt of the proper application, as provided in section 3 hereof, it shall be the duty of the food inspector of the said board of health to inspect the said pasteurizing machine or apparatus to be used by the applicant in pasteurizing such milk, and shall report to said board of health the result of his inspection thereof. If it shall appear to said board of health that the said pasteurizing machine or apparatus is of such character that all pathogenic bacteria and not less than 99 per cent of all bacteria in milk therein pasteurized, in the manner hereinbefore defined, will be killed or destroyed, and that the said pasteurizing apparatus is equipped with a recording thermometer of such type as will permit of its being kept locked by the board of health, a permit shall be granted to the applicant by the board of health.

SEC. 5. All milk intended for pasteurization shall come from cows free from all disease as determined by physical examination at least once in six months, by the veterinarian of the city of Alameda. It shall contain less than 200,000 bacteria per cubic centimeter before pasteurization and less than 10,000 bacteria per cubic centimeter at the time of delivery to the ultimate consumer. Dairies from which this milk is derived must score at least 60 on the score card adopted by the United States Bureau of Animal Industry, Department of Agriculture, and shall be the product of a dairy or dairies conducted in strict conformity with the ordinances of said city and with the regulations of the board of health, and shall be in every respect of such standard as is now, or may be hereafter from time to time, established by ordinance.

SEC. 6. Each bottle or other container in which pasteurized milk is delivered to the consumer, shall be plainly marked with a label bearing the inscription "pasteurized milk."

SEC. 7. All utensils used in the production and handling of pasteurized milk must be properly cleaned and sterilized each time before using, and shall be so constructed that all parts are absolutely free from places in which milk can accumulate or be absorbed in a manner preventing its removal simply by washing; and all surfaces coming in contact with the milk must be smooth and free from rust.

SEC. 8. Pasteurized milk shall be marked with the day of the week of pasteurization, and must be delivered to the consumer within 48 hours thereafter and at a temperature of 50 degrees Fahrenheit or below, and so maintained to the time of delivery.

SEC. 9. Milk once pasteurized shall not be again pasteurized and must be delivered to the consumer in the original container.

SEC. 10. The thermometric records showing the heating and cooling temperature of all pasteurization of milk in any machine or apparatus shall become the property of the board of health and shall be collected by its authorized representatives.

SEC. 11. Any violation of the regulations for the production of pasteurized milk shall result in a revocation of the permit to produce a pasteurized milk for sale or consumption in the city of Alameda.

SEC. 12. Any person violating any of the provisions of this ordinance shall be guilty of a misdemeanor, and upon conviction thereof, shall be punished by a fine of not less than \$25 or more than \$200, or by imprisonment in the city prison for not less than 10 days nor more than 60 days, or by both such fine and imprisonment.

SEC. 13. All ordinances or parts of ordinances in conflict herewith are hereby repealed.

SEC. 14. This ordinance shall take effect on and after October 1, 1916.

#### **Zones of Quiet—Establishment of. (Ord. 72, N. S., July 21, 1916.)**

SECTION 1. There is hereby created and established a zone of quiet in all territory embraced within a distance of 300 feet of every hospital or sanatorium in the city of Alameda.

SEC. 2. It shall be the duty of the city physician to place, or cause to be placed, on lamp posts or other conspicuous places on every street or streets on which any hospital or sanatorium may be situated and at a distance of not less than 300 feet in every direction from said hospital or sanatorium, a sign or placard displaying the words: "Notice. Zone of Quiet. No loud or unnecessary noises permitted."

SEC. 3. It is hereby declared to be unlawful for any person, firm, or corporation to make, cause, or permit to be made or caused, any unnecessary noise or blow any bugle, horn, whistle, or trumpet, or beat any drum, or ring any bell, or play any music, or to call or hawk wares or merchandise upon the public streets, avenues, or alleys in the city of Alameda, within any such zone of quiet, that disturbs the peace and quiet of any of the inmates of any hospital or sanatorium.

SEC. 4. Every person, firm or corporation employing or controlling such person, or persons, who shall violate any of the provisions of this ordinance, shall be deemed

guilty of a misdemeanor and upon conviction thereof shall be punished by a fine of not less than \$5 nor more than \$50 for each offense, and in case such fine be not paid, then by imprisonment in the city prison of the city of Alameda at the rate of one day for every \$2 of the fine so imposed.

### BAY CITY, MICH.

#### Foodstuffs—Protection and Sale—Sanitary Regulation of Establishments—Employees. (Reg. Bd. of H., May 8, 1916.)

SECTION 1. No person, firm, or corporation shall expose for sale in or about any street, sidewalk, doorway, alley, open window, or any other public or private place in the open air adjacent to any street, sidewalk, or alley within the limits of the city of Bay City, any fruit, vegetable, confectionery, meat, poultry, fish, or any other article of food, except such as are contained in dust-proof containers, or such fruit or vegetables as have a natural covering that requires to be removed before eating, or in the use of which for food cooking is necessary unless such articles of food shall be reasonably protected from dust, filth, and other infectious substances, and from flies, by proper covering and in a proper manner so as to reasonably prevent pollution and contamination from such sources, nor unless the same, when so exposed for sale, shall be placed at least 18 inches above the sidewalk, floor, or ground upon which they are so exposed.

SEC. 2. The exposure or display of foodstuffs in any window in which other articles of merchandise are displayed is hereby prohibited.

SEC. 3. Every owner or occupant of any building, room, booth, stall, vehicle, or other place in which human food is prepared, kept, stored, or offered for sale shall maintain such premises, vehicles, or other appurtenances in a clean and wholesome condition.

SEC. 4. Every person while engaged in the handling of articles of food to be sold or offered for sale shall wear clean garments and shall be free from infectious, contagious, or communicable diseases.

SEC. 5. Every room, stall, booth, stand, or other place where articles of food are prepared or offered for sale shall be fitted with such hot and cold water facilities or other appliances as may be required and approved by the board of health, and no such place shall have a water-closet open directly into it or be used for domestic purposes.

SEC. 6. The use of unclean paper or newspaper as an outside or inside wrapping of articles of food is hereby prohibited. All berry boxes which have been used once must be immediately destroyed.

SEC. 7. Every owner or occupant of a building, room, stall, booth, vehicle, or other place in which articles of food are prepared, sold, or offered for sale shall provide a covered water-tight receptacle of sufficient size for the wastes of their business, and which shall be at all times kept covered and so disposed as not to cause a nuisance.

SEC. 8. Every person who peddles meats or fish from a cart, wagon, or other vehicle in the city of Bay City shall keep in such vehicle a proper receptacle for all refuse or waste, in which he shall place or keep such refuse or waste until he shall properly dispose of the same in such a manner as not to cause a nuisance.

SEC. 9. Every manager, owner, or other person in control of any store, market, bakery, or other place where articles of food are prepared, stored, or offered for sale shall cause such store, market, bakery, or other place to be screened, and shall, as far as reasonably possible, prevent flies and other insects from obtaining access to such articles of food, and shall not permit articles of food which are of such nature that they may be defiled or polluted by handling to be exposed for sale in such manner that they may be handled by prospective purchasers or others by whom such handling is not necessary.

SEC. 10. Every person who violates any of the provisions of the next preceding nine sections of these ordinances shall pay a fine not exceeding \$100 for each offense.

SEC. 11. It shall be the duty of the dairy and food inspector to frequently inspect all markets, stores, warehouses, restaurants, bakeries, and vehicles and other places wherein foodstuffs are prepared, stored, or exposed for sale in the city and to report violations of the above next preceding 10 sections of these ordinances to the city attorney for prosecution.

SEC. 12. The foregoing rules and regulations shall take effect and be in force on and after June 1, 1916.

**Ice-Cream Parlors and Soda Fountains—Sanitary Regulation—Utensils—Employees. (Reg. Bd. of H., May 8, 1916.)**

RULE 1. In order that the sale of ice cream, sodas, and soda-fountain sundries may be conducted under sanitary conditions, the operators of ice-cream parlors and soda fountains are hereby instructed that all such goods shall be dispensed only in sterile containers. To this end it is ordered that all soda fountains and ice-cream parlors be provided with facilities for the sterilization of dippers, glasses, spoons, serving dishes, and any other vessel or utensil coming in contact with ice cream, sodas, or soda-fountain sundries.

RULE 2. Facilities for the sterilization of dippers, glasses, spoons, serving dishes, and any other vessel or utensil coming in contact with ice cream, sodas, or soda-fountain sundries shall include:

- (1) An adequate supply of hot and cold water of a quality suitable for drinking purposes.
- (2) Suitable arrangements for supplying boiling water or live steam.
- (3) An adequate supply of clean towels for drying glasses, dishes, etc.
- (4) Suitable provision for taking care of sterile glasses, dishes, etc., so as to keep clean until wanted for use.

RULE 3. All dishes and utensils, after each individual service, shall be washed by (a) rinsing in cold water, (b) then thorough washing in hot water with soap or suitable cleansing powder, (c) then exposing to live steam or boiling water for a period of three to five minutes, then rinsing in clean cold water and draining or wiping dry with a clean towel.

In lieu of the above requirements or where it is found impossible or inexpedient to use live steam or boiling water, paper cups or paper tumblers with individual spoons will be allowed for individual use only.

RULE 4. Refrigerators at soda fountains shall be kept clean by washing with hot water and soap or washing powder.

RULE 5. Employees in ice-cream parlors and at soda fountains shall be cleanly in person and dress, free from infections and contagious diseases, and trained in the conduct of their work.

RULE 6. The use of straws is forbidden except when such straws are protected from dust, dirt, and handling by employees and others.

RULE 7. As soon as empty, all ice cream containers, milk and cream cans shall be thoroughly rinsed with cold water and covered so that no foreign matter may enter said containers or cans.

**BEAUMONT, TEX.**

**Domestic Animals—Hogs—Keeping Prohibited. (Ord. Aug. 1, 1916.)**

SECTION 1. That it shall be unlawful for any person, firm, or corporation to keep a hog or hogs in the city of Beaumont.

SEC. 2. That every person, firm, or corporation who shall keep a hog or hogs in the city of Beaumont shall be deemed guilty of a misdemeanor and upon a conviction therefor in the corporation court of the city of Beaumont, shall be fined in any sum not to exceed the sum of \$200.

**BUFFALO, N. Y.****Rabies—Prevention of—Muzzling of Dogs. (Ord. July 16, 1916.)**

That section 155 of chapter 25 of the ordinances of the city of Buffalo be and the same is hereby amended to read as follows:

SEC. 155. No person owning or having the care, custody, or charge of any dog shall allow or permit such dog, whether in the company of any person or not to be upon any street or public place, unless such dog shall be muzzled or securely held in leash to prevent such dog from biting. Any person owning or having the care, custody, or charge of any dog which is kept on the premises shall, unless said dog is in his or her immediate custody, keep it muzzled or securely fastened in such manner as to prevent said dog from biting any person entering upon or leaving such premises. Any dog found at large or in any place in violation of the provisions of this section shall be seized as directed or ordered by the chief of police and taken to the dog pound, and if not redeemed within three days thereafter such dog shall be destroyed. Before any dog is redeemed from such pound the police shall require proper and sufficient proof of the ownership of said dog. It shall also be the duty of the police to report to the corporation counsel the name and addresses of every person redeeming any such dog. Whenever in any action in the city court of Buffalo against the owner or other person having the care, custody, or control of any dog, satisfactory proof is submitted to said court that such dog is vicious and dangerous by reason of its having bitten or injured any person, the judge of said court before whom the case is tried may issue an order to the chief of police directing the destruction of such dog. In compliance with such order, such dog shall be killed at the dog pound. Any person violating any of the provisions of this section shall be liable to a fine or penalty of not less than \$3 nor more than \$100. The foregoing amendment is immediately necessary for the preservation of public health and safety.

And that section 15 of chapter 21 of the ordinances of the city of Buffalo be, and the same is hereby, amended to read as follows:

SEC. 15. The chief of police shall either personally or through the captains of the respective precincts issue licenses to residents of the city who own or keep a dog or dogs to permit the same to run at large within the city limits. No person owning or harboring a dog within the limits of the city of Buffalo shall permit such dog to run at large unless he shall have procured a license as herein provided; nor unless such dog shall have on a suitable collar to which shall be attached the tag or license plate issued with such license. Such license shall expire on the 30th day of June in each year and shall be granted only upon the payment in advance of the sum of \$1 for each male and \$2 for each female dog so owned or harbored. Any person violating any of the provisions of this section shall be liable to a fine or penalty of not to exceed \$50. The foregoing amendment is immediately necessary for the conduct and administration of the department of public safety.

**PORTLAND, OREG.****Communicable Diseases—Return to School of Pupils Absent on Account of—Appointment of Physicians Authorized to Issue Permits. (Ord. 31663, Apr. 26, 1916.)**

SECTION 1. That the commissioner of public safety be, and is hereby, authorized to appoint not to exceed 10 physicians, whose duty it shall be to issue permits authorizing children who have been absent from school on account of any communicable disease to return to school as soon as the period for the transmission of such disease has passed.

SEC. 2. That the physicians authorized to be appointed under the provisions of this ordinance shall receive a salary of \$15 per month, payable out of the appropriation for personal service heretofore made on account of the bureau of health, for the fiscal year ending November 30, 1916.

**Dairies—Permit Required. (Ord. 31473, Mar. 1, 1916.)**

SECTION 1. After April 1, 1916, it shall be unlawful to maintain, within the corporate limits of the city of Portland, any dairy where more than two cows are kept without obtaining a permit therefor.

SEC. 2. No permit shall be granted for the maintenance of a dairy except upon the application of the owner or occupant of the premises proposed to be used for dairy purposes, and only after notice of such application is given and a hearing thereon is had as provided by this ordinance.

SEC. 3. Each such application shall be filed with the city auditor and shall set forth the location of the land whereon the dairy is to be maintained, a description of said land, and the maximum number of cows to be kept.

SEC. 4. At the time of filing such application, or before, the applicant shall post a notice of said application in two conspicuous positions on the premises to be used as a dairy, so that the same may be clearly read from a street or highway abutting thereon. Said notice shall state the name of the applicant filing said application, the description and location of the premises to be used as a dairy, and the maximum number of cows to be kept therein. Said applicant shall at the same time serve a copy of said notice upon the owner or agent of the owner, if either can be found, or, if neither can be found, then upon the occupant of each dwelling house within 100 feet of the lot lines, if on platted property, or within 200 feet of any part of the building to be used as a dairy barn if on unplatted property; and said applicant shall at the time of filing said application make and file an affidavit with the city auditor that he has posted and served said notices as provided and shall set out in said affidavit the name and post-office address of each person served.

SEC. 5. At the next regular meeting of the city council after the expiration of 10 days from the filing of such application the council shall hear the applicant and all persons interested in the matter of such application, and shall either grant or refuse such permit. Hearing and action on such application may be continued to any subsequent meeting.

SEC. 6. Any person violating any of the provisions of this ordinance shall, upon conviction thereof in the municipal court, be punished by a fine not exceeding \$100, or by imprisonment in the municipal jail for a period not exceeding 30 days, or by both such fine and imprisonment, and each day that such violation continues shall be deemed a separate offense.

SEC. 7. In the event that any applicant for a permit under this ordinance shall practice any fraud upon the council by withholding or misrepresenting any material fact the council reserves the right to cancel any such permit.

SEC. 8. That ordinance No. 30869 of the city of Portland, entitled "An ordinance prohibiting the use of certain buildings for a dairy without a license, prescribing the manner of applying for and granting such licenses, and providing a penalty for violations," passed by the council September 8, 1916, be, and the same is hereby, repealed.

**Meat—Inspection of—Slaughtering and Slaughterhouses—Sanitary Regulation. (Ord. 31461, Feb. 28, 1916.)**

SECTION 1. *Definitions.*—Wherever, in this ordinance, the following words, names, or terms are used, they shall be construed as follows, unless otherwise specifically indicated:

*Animals* shall include cattle, calves, sheep, swine, and goats.

*Bureau of health* shall mean the bureau of health of the city of Portland.

**Carcass** shall apply to the slaughtered body of any animal subject to the provisions of this ordinance.

**House mark** means the mark, stamp, or brand of an official establishment for use on the carcasses, parts of carcasses, and meat of animals slaughtered in such official establishment.

**Inspected and condemned** shall mean that the carcass, parts of carcass, and meat so marked are unfit for food and shall be destroyed for food purposes.

**Inspected and passed** shall mean that the carcass, parts of carcass, and meat so marked have been inspected and passed for food under this ordinance.

**Inspector** shall mean a meat inspector of the bureau of health of the city of Portland.

**Mark** shall include mark, stamp, and brand.

**Official establishment** shall mean any establishment engaged in the business of slaughtering animals at which inspection is maintained under this ordinance and at which more than five animals are slaughtered per week.

**Person** shall include persons, firms, and corporations.

**Primal parts** shall mean the usual sections and cuts of the dressed carcass, commonly known in the trade, such as sides, quarters, shoulders, hams, backs, bellies, etc., and beef tongues, beef livers, beef tails, before they have been cut, shredded, or otherwise subdivided, preliminary to use in the manufacture of meat food products.

**Meat product** shall mean any edible part of the carcass of any cattle, sheep, swine, or goat which is not manufactured, cured, smoked, processed, or otherwise treated.

**Meat food product** shall mean any article of food or any article which enters into the composition of food for human consumption, which is derived or prepared, in whole or in part, from any portion of the carcass of any cattle, sheep, swine, or goat, if such portion is all or a considerable and definite portion of the article, except such articles as organotherapeutic substances, meat juice, meat extract, and the like, which are only for medicinal purposes and are advertised only to the medical profession.

**SEC. 2. Unlawful to slaughter within city limits.**—It shall be unlawful for any person to kill or slaughter or cause to be killed or slaughtered within the limits of the city of Portland any animal or animals the flesh of which is to be sold or offered for sale or intended for consumption; and it shall be unlawful to erect, maintain, or use within the limits of the city of Portland any house, shed, building, structure, yard, block, or inclosure or other building or place as a slaughterhouse or for the purpose of slaughtering animals.

**SEC. 3. Exemption by Federal inspection.**—Establishments and carcasses inspected by the Bureau of Animal Industry of the United States Department of Agriculture are exempt from the provisions of this ordinance respecting sanitation of slaughterhouses, ante mortem and post-mortem inspection of carcasses, disposal of diseased carcasses, and organs, and the tanking thereof, so long as such establishments and carcasses are subject to regulations and restrictions the same or substantially the same as the provisions hereof above referred to. Should inspection by said Bureau of Animal Industry be withdrawn from such establishments and the carcasses emanating therefrom or should the regulations of said bureau be changed so that they differ substantially from the provisions hereof, such establishments in the State of Oregon, regardless of territorial location, shall become subject to the provisions of this ordinance applicable to slaughtering establishments outside of the city and within 1 mile of its boundaries, known as official establishments herein.

**SEC. 4. Unlawful to have certain meat.**—It shall be unlawful to sell, have, keep, or expose for sale for human food or have in possession, any carcass or part thereof which is required to be condemned under section 13 of this ordinance.

**SEC. 5. Unlawful to have unmarked meat.**—It shall be unlawful for any person to sell, keep, or expose for sale or have in possession any carcass or part thereof upon each primal part of which there has not been placed an inspector's mark showing that the

same has been inspected and passed for food purposes by the Bureau of Animal Industry of the United States Department of Agriculture, or by the city of Portland, or in lieu of an inspector's mark, the house mark of the official establishment in which said animal was killed. Possession only of any carcass or part thereof not marked as required herein shall not be deemed a violation of this ordinance if immediately upon the receipt thereof the person receiving it shall notify the bureau of health.

SEC. 6. *Permits for slaughterhouses.*—The owner or operator of any establishment outside of the city of Portland, and within 1 mile from its boundaries, who wishes to engage in the business of slaughtering animals for consumption in the city of Portland, shall make application to the bureau of health for a permit so to do: *Provided, however,* That any person engaged in the business of slaughtering who does not slaughter more than five animals per week need not apply for or obtain said permit. The application must be in writing and shall contain:

(a) The name and business address of the applicant;  
 (b) The location of the establishment;  
 (c) Such other information as may be required by the chief of the bureau of health;  
 (d) An agreement by the applicant to allow the inspection, condemnation and disposal of animals and carcasses in accordance with the requirements of the ordinances of the city of Portland;

(e) An agreement by the applicant to faithfully comply with the ordinances of the city of Portland respecting the construction and sanitation of the establishment, corrals and pens, the examination, inspection, condemnation, and disposal of all animals, carcasses, and parts thereof. Blank application forms shall be furnished by the bureau of health upon request.

When such application is filed with the bureau of health, the chief of the bureau shall cause said establishment to be examined, and if the same shall be found to comply with the provisions of this ordinance relative to the construction, equipment, and cleanliness of such establishment, he shall issue a permit and assign to such establishment a house mark of such size and design as he may approve, being careful to prevent the use of a design which may be confused with another previously approved, or with the inspector's mark. Such permits shall be issued free of charge and renewed annually in January. In case of change of ownership or change of location of any establishment already having inspection, a new application shall be made.

SEC. 7. *Sanitation of slaughterhouses.*—Establishments to which permits have been issued as herein provided, shall be kept in a sanitary condition and shall conform strictly to the following requirements: *Provided, however,* That subdivisions 1, 2, 3, and 4 of this section shall not become effective until three months after the passage of this ordinance:

(1) All slaughtering floors shall be water-tight, of nonabsorbent material, and so constructed as to be readily flushed and drained.

(2) All rooms, except the coolers and cellars, shall have at least 1 square foot of window space to every 8 square feet of floor space.

(3) The side walls of all killing rooms, when not constructed of brick, stone, or concrete, or smooth-matched lumber, well painted, shall be covered with nonabsorbent material to a height of 6 feet above the floor.

(4) Ceilings, walls, and pillars of slaughterhouses shall be painted some light color.

(5) All rooms, except the cooler, shall be screened with a screen sufficiently fine to keep out flies.

(6) All trucks, trays, and other receptacles, all chutes, platforms, racks, tables, etc., and all knives, saws, cleavers, and other tools, and all utensils, machinery, and vehicles used in moving, handling, cutting, chopping, mixing, canning, or other process, shall be thoroughly cleaned daily.

(7) The managers of establishments must require employees to be cleanly. The aprons, smocks, or other outer clothing worn by employees who handle meat or meat

food products shall be of a material that is readily cleansed and made sanitary, and only clean garments shall be worn. Persons who handle meat or meat food products shall be required to keep their hands clean, and they shall be required also to pay particular attention to the cleanliness of their boots and shoes.

(8) Persons affected with tuberculosis or any other communicable disease shall not be employed in any of the departments of official establishments where carcasses are dressed and meat is handled or meat food products are prepared; and every person employed in any of such establishments shall have a certificate of health obtained from some reputable physician licensed to practice in the State of Oregon, and such certificate shall be exhibited upon demand to any inspector or to any other official of the bureau of health. Such certificate shall state in effect that the physician issuing the same has examined the person named therein, stating the date of such examination, and that he is free from tuberculosis and any other communicable disease. A new certificate must be obtained upon the expiration of one year from the date of examination. If any employee of any of such establishments is suspected of being affected with tuberculosis or other communicable disease, notwithstanding such certificate of health, the inspector shall immediately report the name of such person to the manager of the establishment and to the chief of the bureau of health.

(9) All water-closets, toilet rooms and dressing rooms shall be entirely separated from compartments in which carcasses are dressed or meat products or meat food products are cured, stored, packed, handled, or prepared. They shall be conveniently located, sufficient in number, ample in size, and fitted with modern lavatory accommodations, including toilet paper, soap, running hot and cold water, individual towels, etc. They shall be properly lighted, suitably ventilated, and kept in a sanitary condition.

(10) The rooms or compartments in which meat products or meat food products are prepared, cured, stored, packed, or otherwise handled shall be free from odors from toilet rooms, catch basins, casing departments, tank rooms, hide cellars, etc., and shall be kept free from flies and other vermin by screening or other methods. All rooms or compartments shall be provided with cuspidors of such shape as not readily to upset and of such material and construction as to be readily disinfected, and employees who expectorate shall be required to use them.

(11) Stock pens shall be separated by a tight partition from all rooms where meats are handled or stored. Such pens shall be well drained and kept clean. If a horse stable is maintained in the same building, the intervening partition shall be of tight, sound construction.

(12) All blood, offal, manure, etc., shall be removed from the region of the slaughterhouse daily, and either burned, buried, or otherwise disposed of. Tanks for blood and offal shall be made of nonabsorbent material, and shall be kept covered with a tight-fitting cover. If offal be used for feed, it shall be cooked and not fed within 200 feet of killing rooms, or any room where meats are handled or stored.

(13) Dogs shall not be allowed to enter any room or place where meats are slaughtered, stored, or handled.

(14) No use incompatible with proper sanitation shall be made of any part of the premises on which such establishment is located. All yards, fences, pens, chutes, alleys, etc., belonging to the premises of such establishments, whether they are used or not, shall be maintained in a sanitary condition and no nuisance shall be allowed in the establishment or on its premises.

(15) Butchers who dress or handle diseased carcasses or parts shall cleanse their hands of all grease and then immerse them in a disinfectant and rinse them in clear water before dressing or handling healthy carcasses. All butchers' implements used in dressing diseased carcasses shall be sterilized either in boiling water or by immersion in a disinfectant, followed by rinsing in clear water. Separate sanitary trucks, etc., which are appropriately and distinctively marked, shall be furnished for handling

diseased carcasses and parts. Following the slaughter of any animal affected with an infectious disease, a stop shall be made until the implements have been cleansed and disinfected, unless other clean implements are provided.

(16) The bureau of health shall furnish implements for use in dissecting, incising, or examining diseased carcasses or unsound parts, and shall employ the same means for disinfecting implements, hands, etc., as are prescribed for employees of the establishment.

(17) Due care shall be taken to prevent meat products and meat-food products from falling on the floor; and in the event of their having so fallen, they shall be condemned or the soiled portions removed and condemned. When meat products or meat-food products are being emptied into tanks, some device, such as a metal funnel, shall be used.

(18) Carcasses shall not be inflated with air from the mouth, and no inflation of carcasses, except by mechanical means, shall be allowed. Carcasses shall not be dressed with skewers, knives, etc., that have been held in the mouth. Skewers shall be cleaned before being used again. Spitting on whetstones or steels when sharpening knives shall not be allowed.

(19) Only good, clean, and wholesome water and ice shall be used in the preparation of carcasses, parts of carcasses, meat products, or meat-food products, and the supply thereof shall be subject to the approval of the bureau of health.

(20) Wagons or cars in which meat products or meat-food products are transported shall be kept in a clean and sanitary condition. The wagons used in transporting loose meat products between official establishments shall be so closed and covered that the contents shall be kept clean.

(21) Skins and hides from animals condemned for tuberculosis or any other disease infectious to men but showing no outward appearance of disease, may be removed (except as provided in section 13, subdivision 2) for tanning or other uses in the arts, when disinfected as follows: Each skin and hide must be immersed for not less than five minutes in a 5 per cent solution of liquor cresolis composition (compositus), or a 5 per cent solution of carbolic acid, or a 1 to 1,000 solution of bichloride of mercury.

SEC. 8. *Ante-mortem inspection.*—(1) Except as herein otherwise provided, no animal shall be slaughtered at an official establishment until the same has been examined and inspected by an inspector. Satisfactory facilities shall be provided for conducting examinations and inspection and for separating and holding apart from passed animals those marked "Suspect."

(2) All animals suspected of being affected with any disease or conditions which, under this ordinance, would probably cause their condemnation in whole or in part when slaughtered shall be marked with the word "Suspect." All such animals, except as hereinafter provided, shall be set apart and slaughtered separately from other animals at an official establishment.

(3) Animals which have been marked "Suspect" for pregnancy or for having recently given birth to young, and which have not been exposed to any infectious or contagious disease, and vaccine animals with unhealed lesions accompanied by fever and which have not been exposed to any other infectious or contagious disease, are not required to be slaughtered, but before any such animal is released the mark shall be removed by an inspector, who shall report his action to the bureau of health.

(4) If any pathological condition is suspected in which the question of temperature is important, such as Texas fever, hog cholera, anthrax, pneumonia, blackleg, or septicemia, the exact temperature shall be taken. Due consideration, however shall be given to the fact that extremely high temperature may be found in otherwise normal hogs when subjected to exercise or excitement, and a similar condition may obtain to a less degree among other classes of animals.

(5) Animals commonly termed "downers," or crippled animals, shall be marked before slaughter for the purpose of identification at the time of slaughter, and shall be passed upon in accordance with this ordinance.

SEC. 9. *Post-mortem inspection.*—Upon the slaughter of any animal and the dissection of the carcass thereof, the head, tongue, tail, thymus gland, all viscera, and all parts and blood used in the preparation of meat products or meat food products shall be retained in such a manner as to preserve their identity until they and the carcass and the parts thereof of such animal have been inspected and passed or condemned as provided herein. Suitable racks or metal receptacles shall be provided for retaining such parts.

(2) Carcasses and parts thereof found to be sound, healthful, wholesome, and fit for human food shall be passed and marked "Inspected and passed," or an abbreviation thereof, together with the number of the inspector by whom the same was inspected.

(3) Should any lesion or disease or other condition that would render the meat or any organ unfit for food purposes be found on post-mortem examination, the carcass, part, or organ shall be marked immediately with a tag bearing the word "Retained." Carcasses which have been so marked shall not be washed or trimmed unless such washing or trimming is authorized by the inspector.

(4) Retained carcasses shall be subjected to a final inspection, and immediately after this is completed each carcass or part thereof which is found to be unfit for human food shall be marked "Inspected and condemned." If, however, upon final inspection the carcass or part thereof is found to be wholesome and fit for human food, the inspector shall remove the "Retained" tag and mark such carcass or part thereof "Inspected and passed."

SEC. 10. *Time of slaughter.*—Slaughtering of animals and the preparation of meat food products at official establishments shall be done within reasonable hours. Slaughtering shall not commence until the bureau of health, or an inspector thereof, has been given at least five hours' notice of the time fixed therefor. If an inspector does not appear at such official establishment at the time designated, ante-mortem and post-mortem inspection may be dispensed with, slaughtering may proceed, and, in lieu of the inspector's mark, the manager of such establishment shall cause to be placed on each primal part of each animal so slaughtered the house mark of the establishment in which the animal was killed. The house mark upon any carcass or part thereof shall signify that the manager of the establishment has examined, or has caused to be examined, each and every part of such carcass and that he verily believes that the same is not diseased and is fit and wholesome for human food, and that the animal would have passed both the ante-mortem and post-mortem inspections if such inspections had been made. Willful misuse of any such house mark by the placing thereof upon a carcass known to the manager or any of the employees of such establishment to be diseased, unsound, unhealthful, or otherwise unfit for human food, or by using such house mark in lieu of the inspector's mark in cases other than as in this section provided, shall be sufficient to cause the revocation and cancellation of the permit issued to the establishment to which such house mark belongs.

SEC. 11. *Refusal and revocation of permit.*—The chief of the bureau of health shall revoke any permit issued by virtue of this ordinance if the person to whom such permit was issued does not comply with the provisions of this ordinance.

SEC. 12. *Inspection of carcasses prepared outside of official establishment.*—The carcasses of all animals which are not slaughtered in an official establishment or under Federal inspection as hereinbefore provided shall be brought to such places as may be selected by the chief of the bureau of health and shall there be inspected. Such carcasses shall have attached thereto a card setting forth the name and address of the shipper and the place where the animals were slaughtered.

Calves shall have the liver, navel, and kidneys attached to the carcass by their natural attachments.

Sheep and goats shall have at least the liver and kidneys attached to the carcass by their natural attachments.

Hogs may be shipped without the internal organs, but the body lymphatic glands must not be removed.

If, upon inspection, any of such carcasses and the parts thereof be found free from disease and otherwise sound, healthful, wholesome, and fit for human food, the inspector shall place upon each primal part thereof a stamp with the words "Inspected and passed" thereon, or an abbreviation thereof, together with the number of the inspector. Such carcass, when so stamped, shall be admitted to the city for the purpose of sale therein.

If any part of any such carcass be found to be diseased, unwholesome, unhealthful, or otherwise unfit for human food, such carcass shall be marked by the inspector with a stamp containing the words "inspected and condemned," and the whole of such carcass shall thereupon be destroyed for food purposes under the direction of the bureau of health and as provided by section 16 hereof.

**SEC. 13. Disposal of diseased carcasses and organs.**—(1) The carcass or parts of carcasses of all animals slaughtered at an official establishment and found at the time of slaughter or at any subsequent inspection to be affected with any of the diseases or conditions named below shall be disposed of according to the subdivision of this section pertaining to the disease or condition.

(2) All carcasses showing lesions of anthrax or charbon, regardless of the extent of the disease, and including the hide, hoofs, horns, viscera, fat, blood, and all other portions of the animal, shall be condemned and immediately incinerated. The killing bed upon which the animal was slaughtered shall be disinfected with a 10 per cent solution of formalin, and all knives, saws, cleavers, and other instruments which have come in contact with the carcass shall be treated as provided in section 7, subdivision 15, before being used upon another carcass.

(3) Carcasses of animals showing lesions of blackleg shall be condemned.

(4) Carcasses of animals affected with hemorrhagic septicemia shall be condemned.

(5) Carcasses showing lesions of pyemia or septicemia shall be condemned.

(6) Carcasses of vaccine animals mentioned under section 8, subdivision 3, shall be condemned.

(7) Carcasses of animals which showed symptoms of rabies before slaughter shall be condemned.

(8) Carcasses of animals which showed symptoms of tetanus before slaughter shall be condemned.

(9) Carcasses of animals affected with malignant epizootic catarrh and showing generalized inflammation of the mucous membranes shall be condemned.

(10) Paragraph 1. The carcasses of all hogs marked as suspects on ante-mortem inspection shall be given careful post-mortem inspection, and if it appears that they are affected with either acute hog cholera or swine plague, they shall be condemned.

Paragraph 2. Carcasses of hogs which show acute and characteristic lesions of either hog cholera or swine plague in any organ or tissue, other than the kidneys or lymph glands, shall be condemned. Inasmuch as lesions resembling lesions of hog cholera or swine plague occur in the kidneys and lymph glands of hogs not affected with either hog cholera or swine plague, carcasses of hogs in the kidneys or lymph glands of which appear any lesions resembling lesions of either hog cholera or swine plague shall be carefully further inspected for corroborative lesions. On such further inspection—

(a) If the carcass shows such lesions in the kidneys or in the lymph glands or in both, accompanied by characteristic lesions in some other organ or tissue, then all

lesions shall be regarded as those of hog cholera or swine plague, and the carcass shall be condemned.

(b) If the carcass shows in any organ or tissue, other than the kidneys or lymph glands, lesions of either hog cholera or swine plague which are slight and limited in extent it shall be passed for sterilization in accordance with section 17.

(c) If the carcass shows no indication of either hog cholera or swine plague in any organ or tissue other than the kidneys or lymph glands it shall be passed for food, unless some other provision of this ordinance requires a different disposal.

(11) Paragraph 1. Carcasses of animals showing generalized actinomycosis shall be condemned.

Paragraph 2. Carcasses of animals in a well-nourished condition showing uncomplicated localized actinomycotic lesions may be passed after the infected organs or parts have been removed and condemned, except as provided in paragraph 3 of this subdivision.

Paragraph 3. Heads affected with actinomycosis (lumpy jaw), including the tongue, shall be condemned, except that when the disease of the jaw is slight, strictly localized, and without suppuration, fistulous tracts, or lymph-gland involvement, the tongue, if free from disease, may be passed.

(12) When the lesions of caseous lymph-adenitis are limited to the superficial lymphatic glands or to a few nodules in an organ, involving also the adjacent lymphatic glands, and the carcass is well nourished, the meat may be passed after the affected parts are removed and condemned. If extensive lesions, with or without pleuritic adhesions, are found in the lungs, or if several of the visceral organs contain caseous nodules and the carcass is emaciated, it shall be condemned.

(13) Paragraph 1. The following principles are declared for guidance in passing on carcasses affected with tuberculosis:

Principle a. The fundamental thought is that meat should not be used for food if it contains tubercle bacilli, or if there is a reasonable possibility that it may contain tubercle, or if it is impregnated with toxic substances of tuberculosis or associated septic infections.

Principle b. On the other hand, if the lesions are localized and not numerous, if there is no evidence of distribution of tubercle bacilli through the blood, or by other means, to the muscles or to parts that may be eaten with the muscles, and if the animal is well nourished and is in good condition, there is no proof, even reason to suspect, that the flesh is unwholesome.

Principle c. Evidences of generalized tuberculosis are to be sought in such distribution and number of tuberculous lesions as can be explained only upon the supposition of the entrance of tubercle bacilli in considerable number into the systemic circulation. Significant of such generalization are the presence of numerous uniformly distributed tubercles throughout both lungs, also tubercles in the spleen, kidneys, bones, joints, and sexual glands, and in the lymphatic glands connected with these organs and parts, or in the splenic, renal, prescapular, popliteal, and inguinal glands, when several of these organs and parts are coincidentally affected.

Principle d. By localized tuberculosis is understood tuberculosis limited to a single or several parts or organs of the body without evidence of recent invasion of numerous bacilli into the systemic circulation.

Paragraph 2. The following rules shall govern the disposal of tuberculous meat:

Rule a. The entire carcass shall be condemned—

(a) When it was observed before the animal was killed that it was suffering with fever.

(b) When there is a tuberculous or other cachexia, as shown by anemia and emaciation.

(c) When the lesions of tuberculosis are generalized, as shown by their presence not only at the usual seats of primary infection, but also in parts of the carcass or the

organs that may be reached by the bacilli or tuberculosis only when they are carried in the systemic circulation. Tuberculous lesions in any two of the following mentioned organs are to be accepted as evidence of generalization when they occur in addition to local tuberculous lesions in the digestive or respiratory tracts, including the lymphatic glands connected therewith: Spleen, kidney, uterus, udder, ovary, testicle, adrenal gland, brain, or spinal cord or their membranes. Numerous uniformly distributed tubercles throughout both lungs also afford evidence of generalization.

(d) When the lesions of tuberculosis are found in the muscles or intermuscular tissue or bones or joints, or in the body lymphatic glands, as a result of draining the muscle, bones, or joints.

(e) When the lesions are extensive in one or both body cavities.

(f) When the lesions are multiple, acute, and actively progressive.

(Evidence of active progress consists in signs of acute inflammation about the lesions or liquefaction necrosis or the presence of young tubercles.)

Rule b. An organ or part of a carcass shall be condemned under any of the following conditions:

(a) When it contains lesions of tuberculosis.

(b) When the lesion is immediately adjacent to the flesh, as in the case of tuberculosis of the parietal pleura or peritoneum, not only the membrane or part affected but also the adjacent thoracic or abdominal wall is to be condemned.

(c) When it has been contaminated by tuberculous material, through contact with the floor, a soiled knife, or otherwise.

(d) Heads showing lesions of tuberculosis shall be condemned, except that when the heads of hogs are from carcasses passed for food or for sterilization and the lesions are slight, are calcified or encapsulated, and are confined to lymph glands in which not more than two glands are involved, the head may be passed for sterilization after the diseased tissues have been removed and condemned.

(e) An organ shall be condemned when the corresponding lymphatic gland is tuberculous.

Rule c. The carcass, if the tuberculous lesions are limited to a single or several parts or organs of the body (except as noted in rule a), without evidence of recent invasion of tubercle bacilli into the systemic circulation, shall be passed after the parts containing the localized lesions are removed and condemned in accordance with rule b.

Rule d. Carcasses which reveal lesions more severe or more numerous than those described for carcasses to be passed (rule c), but not so severe nor so numerous as the lesions described for carcasses to be condemned (rule a), may be rendered into lard or tallow or otherwise sterilized in accordance with section 17, if the distribution of the lesion is such that all parts containing tuberculous lesions can be removed.

(14) Carcasses showing lesions to warrant the diagnosis of Texas fever shall be condemned.

(15) Carcasses of sheep affected with parasitic icterohematuria shall be condemned.

(16) Carcasses of animals affected with mange or scab, in advanced stages, or showing emaciation or extension of the inflammation to the flesh, shall be condemned. When the disease is slight the carcass may be passed.

(17) Paragraph 1. (a) Carcasses of cattle (including the viscera) infested with tapeworm cysts known as cysticerene (*cysticercus*) *bovis* shall be condemned if the infection is excessive or if the meat is watery or discolored. Carcasses shall be considered excessively infested if incisions in various parts of the musculature expose on most of the cut surfaces two or more cysts within an area the size of the palm of the hand.

(b) Carcasses of cattle showing a slight infestation, that is, not to exceed 10 cysts, as determined by a careful examination of the heart, muscles of mastication, tongue, diaphragm and its pillars, and of portions of the carcass rendered visible by the process of dressing may be passed for food after removal and condemnation of the cysts,

with the surrounding tissues, provided the carcasses and parts, appropriately identified by retained tags, are held in cold storage or pickle for not less than 21 days under conditions which will insure proper preservation: *And provided, further,* That if the temperature at which such carcasses and parts are held in cold storage does not exceed 15° F., the period of retention may be reduced to six days. Carcasses which show no cysts except in the heart may be passed for food after retention in cold storage or pickle as above provided, irrespective of the number of cysts in the heart.

(c) Carcasses of cattle showing a moderate infestation, that is, a greater number of cysts than mentioned in clause (b), but which are not so extensively infested as indicated in clause (a), may be passed for sterilization. In case such carcasses are not sterilized as required by section 17, they shall be condemned.

(d) The inspection for cysticorns (*cysticercus*) bovis may be omitted in the case of calves under six weeks old.

Paragraph 2. Carcasses of animals found infested with gid bladder worms (*coonus cerebralis*, *multiceps socialis*) may be passed after condemnation of the infected organ (brain, spinal cord).

Paragraph 3. Carcasses or parts of carcasses found infested with the hydatid cyst (*echinococcus*) may be passed after condemnation of the infected parts or organs.

(18) All carcasses of animals so infected that consumption of the meat or meat-food products thereof may give rise to meat poisoning shall be condemned. This section covers all carcasses showing signs of—

(a) Acute inflammation of the lungs, pleura, pericardium, peritoneum, or meninges.

(b) Septicemia or pyemia, whether puerperal, traumatic, or without any evident cause.

(c) Severe hemorrhagic or gangrenous enteritis or gastritis.

(d) Acute diffuse metritis or mammitis.

(e) Polyarthrititis.

(f) Phlebitis of the umbilical veins.

(g) Traumatic pericarditis.

(h) Any other inflammation, abscess, or suppurating sore, if associated with acute nephritis, fatty and degenerated liver, swollen soft spleen, marked pulmonary hyperemia, general swelling of lymphatic glands, and diffuse redness of the skin, either singly or in combination.

Immediately after the slaughter of any animal so diseased the premises and implements used must be thoroughly disinfected as prescribed elsewhere in this ordinance. The part of any carcass coming into contact with the carcass or any part of the carcass of any animal covered by this section, other than those affected with the disease mentioned in (a) above, or with the place where such animal was slaughtered, or with the implements used in the slaughter, before thorough disinfection of such place and implement has been accomplished, or with any other contaminated object shall be condemned; in case the contaminated part is not removed from the carcass within two hours after such contact, the whole carcass shall be condemned.

(19) Carcasses showing any degree of icterus with a parenchymatous degeneration of organs, the result of infection or intoxication, and those which show an intense yellow or greenish yellow discoloration without evidence of infection or intoxication, shall be condemned. Carcasses affected with icterus, the result of conditions other than those before stated in this subdivision, but which lose such discoloration on chilling, shall be passed for food, while those which do not lose such discoloration may be passed for sterilization. No carcass affected with icterus may be passed for food or for sterilization unless the final inspection thereof is completed under natural light.

(20) Carcasses which give off the odor of urine or a strong sexual odor shall be condemned.

(21) Hogs affected with urticaria (diamond skin disease), tinea tonsurans, demodex folliculorum, or erythema may be passed after detaching and condemning the skin, if the carcass is otherwise fit for food.

(22) Carcasses of animals showing any disease such as generalized melanose (melanosis), pseudo leukemia, etc., which affects the system of the animals shall be condemned.

(23) Any organ or part of a carcass which is badly bruised or which is affected with tumors, malignant or benign, abscesses, suppurating sores, or liver flukes, shall be condemned, but when the lesions are so extensive as to affect the whole carcass, the whole carcass shall be condemned.

(24) Carcasses of animals too emaciated or anemic to produce wholesome meat, and carcasses which show a slimy degeneration of the fat or a serious infiltration of the muscles, shall be condemned.

(25) Carcasses of animals showing symptoms of milk fever or railroad sickness at the time of slaughtering shall be condemned, as the flesh of such animals is frequently darker in color and more watery than is natural, and the present view of pathology of at least the first disease suggests auto-intoxication.

(26) Carcasses of animals in advanced stages of pregnancy (showing signs of parturition), also carcasses of animals which have within 10 days given birth to young and in which there is no evidence of septic infection, may be passed for sterilization; otherwise, they shall be condemned.

(27) Paragraph 1. Carcasses of calves, pigs, kids, and lambs too immature to produce wholesome meat shall be condemned. Such carcasses shall be considered too immature to produce wholesome meat if (a) the meat has the appearance of being water-soaked, is loose, flabby, tears easily, and can be perforated with the fingers; or (b) its color is grayish red; or (c) good muscular development as a whole is lacking, especially noticeable on the upper shank of the leg, where small amounts of serous infiltrates or small edematous patches are sometimes present between the muscles; or (d) the tissue which later develops as the fat capsule of the kidneys is edematous, dirty yellow or grayish red, tough, and intermixed with islands of fat.

Paragraph 2. All unborn and stillborn animals shall be condemned.

(28) In all cases where carcasses showing localized lesions of disease are passed for food or for sterilization, the diseased parts shall be removed before the "retained" tag is taken from the carcass, and such parts shall be condemned.

(29) Hogs which have been allowed to pass into the scalding vat alive, or have been suffocated in other ways, shall be condemned.

(30) All animals that die in abattoir pens and those in a dying condition before slaughter shall be condemned. In conveying to the tank animals which have died in the pens of the establishment, they shall not be allowed to pass through compartments in which food products are prepared. No dead animals shall be brought into an establishment for rendering from outside the premises of said establishment unless permission is first obtained from the bureau of health.

(31) When a portion of a carcass is to be condemned on account of slight bruises, the bruised portion shall be removed immediately and tanked, and the remainder of the carcass shall be marked "inspected and passed." When desired, a retaining room may be provided in one part of the cooler for the retention of such carcasses until after they are chilled, when the bruised portion may be removed.

(32) Portions of intestines that show evidences of infestation with esophagostoma or other nodular affection shall be condemned.

(33) Hog carcasses found before evisceration has taken place to be affected with an infectious or contagious disease, including tuberculosis, shall not be eviscerated at the regular killing bed or bench, but shall be taken, separate from other carcasses, to the retaining room or other specially prepared place and there opened and examined.

SEC. 15. *Speedy disposal of condemned carcasses.*—Condemned carcasses shall not be allowed to accumulate, but shall be removed and denatured as provided in section 16, subdivision 5, or tanked within a reasonable time after condemnation.

SEC. 16. *Tanks and tanking.*—All tanks and equipment used for rendering and preparing edible products shall be in compartments separate from those used for rendering inedible products, and there shall be no connections by means of pipes or otherwise between the tanks or compartments containing inedible products and those containing edible products. The foregoing requirement shall not go into effect until three months after the passage of this ordinance.

All condemned carcasses or parts of carcasses, meat products, and meat food products shall be disposed of as follows:

(1) After the lower opening and draw-off valves of the tank have been securely sealed by an inspector and the condemned carcasses or parts of carcasses or meat food products are placed therein in his presence, the upper openings shall be likewise securely sealed by such inspector, whose duty it shall be then to see that a sufficient force of steam (not less than 40 pounds, producing a temperature of 288° F.), is turned into the tanks and maintained a sufficient time (not less than six hours) effectually to render the contents unfit for any edible product. Wire and lead seals will be provided without cost by the bureau of health for the sealing of tanks. Proprietors of establishments shall equip all tanks used for condemned products so that they may be securely sealed in the manner above specified.

(2) A sufficient quantity of coloring matter or other substance to be designated by the bureau of health shall be used in connection with the rendering of all condemned carcasses, parts of carcasses, meats, meat products or meat food products, to destroy them effectually for food purposes.

(3) The seals of tanks containing condemned meats or tankage thereof shall be broken only by an employee of the bureau of health, and such employee shall supervise the drawing off of contents of such tanks and the marking of the tallow and grease as inedible.

(4) If the establishment refuses or fails to treat or tank condemned carcasses, parts of carcasses, meat products or meat food products, as required by this ordinance, the inspector in charge shall report the fact to the bureau of health in order that inspection may be withdrawn from such establishment.

(5) Any meat or meat food products condemned at establishments which have no facilities for tanking, shall in the presence of an inspector, be freely slashed with a knife, and then denatured with kerosene or other prescribed agent, and then removed from the establishment; or the inspector shall require such meat products or meat food products to be destroyed by incineration, under his supervision.

SEC. 17. *Sterilization.*—(1) Carcasses and parts of carcasses passed for sterilization may be rendered into lard or tallow, provided, that such rendering is done in the following manner: The lower opening of the tank shall first be securely sealed by a bureau employee, then the carcasses or parts shall be placed in the tank in his presence, after which the upper opening shall be securely sealed by such employee, who shall then see that a sufficient force of steam is turned into the tank. Such carcasses and parts shall be cooked at a temperature not lower than 220° F., for a time sufficient to render them effectually into lard or tallow.

(2) Establishments not equipped with steaming tanks for rendering carcasses and parts into lard or tallow as provided in subdivision 1 of this section may render such carcasses or parts in open kettles under the direct supervision of an employee of the bureau of health. Such rendering shall be done at a temperature, and for a time sufficient to render the carcasses and parts effectually into lard or tallow, and shall be done only during the regular hours of work. Carcasses and parts passed for sterilization and which are not rendered into lard or tallow may be utilized for food purposes pro-

vided they are first sterilized by methods, and handled and marked in a manner approved by the chief of the bureau.

(3) Any carcasses or parts prepared for food purposes in compliance with subdivision 2 of this section, whether canned or placed in other approved container or not shall be plainly marked "prepared from meat passed for sterilization."

SEC. 18. *Right of appeal.*—(1) If the manager of any official establishment or any shipper, owner or agent of the owner, of a carcass, as provided in section 12 hereof, feels aggrieved by the decision of an inspector in condemning a carcass, such manager or shipper may appeal from such decision to the chief of the bureau of health by filing in the office of said bureau, a written appeal specifying the name and address of the appellant, the grounds of the appeal, the decision of the inspector, his name and number, and the date and place on and at which the decision was made. The chief of the bureau of health shall forthwith and in a summary manner, investigate the merits of said appeal permitting the appellant to be heard. The chief of the bureau upon such investigation may sustain, reverse, or modify the decision appealed from.

(2) The decision of the chief of the bureau of health shall be final and conclusive unless within 24 hours thereafter, excluding Sundays and holidays, the manager, shipper, owner, or agent of the owner, of a carcass shall file with the auditor of the city of Portland an appeal to the council, paying therefor a fee of \$2.50. Such appeal shall be in writing, and shall contain the name and address of the appellant, the name and number of the inspector from whose decision the appeal is taken, the date and place on and at which the decision appealed from was made, the grounds of such appeal, and the determination of the chief of the bureau of health. Upon the filing of any such appeal the council will investigate the merits thereof at the earliest opportunity, giving the aggrieved parties an opportunity of being heard. The findings of the council shall be final and conclusive, and shall forthwith be enforced. If the council determine that the appeal is well taken, it may direct a refund of the fee paid for filing such appeal.

(3) Pending any such appeal, the carcass of the animal concerning which such appeal is taken shall be kept separate and apart from others under the supervision of the inspector, so that it may be disposed of in accordance with the final determination of the appeal.

SEC. 19. *Inspectors.*—The commissioner in charge of the bureau of health shall appoint a chief meat inspector and two meat inspectors whose salaries shall be fixed by ordinance, and such other inspectors as said commissioner may wish who shall serve without salary. All inspectors shall be graduate veterinarians from a college recognized by the United States Department of Agriculture, and shall have had at least two year's experience in the practice of their profession.

SEC. 20. *Inspectors' badges.*—Each inspector of the bureau of health engaged in inspection under this ordinance will be furnished with a numbered badge which shall be worn on the outer clothing while in the performance of his official duties, and which shall not be allowed to leave his possession. The number of his badge shall correspond with the number of the stamp which he uses to mark carcasses.

SEC. 21. *Powers of inspectors.*—It shall be the duty of inspectors, and they are hereby authorized and empowered, for the purpose of enforcing the provisions of this ordinance, to enter any place where the carcass or part thereof of any animal mentioned in this ordinance may be kept, stored, held, exposed, or offered for sale.

SEC. 22. *Unlawful to resist inspectors.*—It shall be unlawful for any person or persons willfully to resist, obstruct, abuse, or interfere with any inspector engaged in the execution of his duties as such inspector.

SEC. 23. *Possession of marks, etc.*—(1) It shall be unlawful for any person, except the inspectors herein provided for, to have in possession, keep, or use any mark provided for or used by inspectors for marking any article herein required to be marked by an inspector.

(2) It shall be unlawful for any person to have in possession, keep, make, or use any mark having thereon any device or words similar in character or import to the marks provided for or used by inspectors for marking such articles.

(3) It shall be unlawful for any person, except the owner of an official establishment to which a particular house mark belongs, or the duly authorized agents and employees of such owner, to have in possession, keep, or use any house mark belonging to or used by such official establishment for marking any article herein required to be marked by such official establishment.

(4) It shall be unlawful for any person to have in possession, keep or use any mark having thereon any device or words similar in character or import to the marks belonging to or used by official establishments for marking such articles.

SEC. 24. *Possession as for sale.*—The fact that any animal be in any stockyard or slaughterhouse pen subject to the inspection of the city of Portland shall be considered sufficient evidence that the same is to be slaughtered and exposed for sale, and the fact that the carcasses of any animals or any part thereof are found in any public or private market place, dressed and prepared as such meats usually are prepared for the market, shall be deemed as sufficient evidence that the same are on sale, and no animal or part thereof that has been examined and condemned by an inspector shall be held, sold, or offered for sale for human food in any market in this city.

SEC. 25. *Bribery.*—It shall be considered a violation of this ordinance, punishable by a fine of not more than \$300 or by imprisonment in the city jail for a period of not to exceed six months, or both, for each and every offense, and also by instant dismissal on conviction, for any inspector or other employee of the bureau of health to receive or accept from any person engaged in the sale of meat products or meat food products in the city of Portland or any person engaged in the business of slaughtering animals and the preparation of the carcasses thereof for consumption in the city of Portland, any gift, money, or thing of value given with any purpose or intent whatsoever.

SEC. 26. *Penalties.*—Any person violating any of the provisions of this ordinance (except section 25, violation of which shall be punished as therein provided) shall, upon conviction thereof, be punished by a fine of not more than \$200 or by imprisonment not more than 30 days, or by both such fine and imprisonment, for each and every offense.

SEC. 27. *Rules and regulations.*—The commissioner of the city of Portland in charge of the bureau of health shall, from time to time, make such rules and regulations as are necessary for the efficient execution of this ordinance.

SEC. 28. *Repeal.*—Paragraph 1 of section 29 of ordinance No. 13885, entitled "An ordinance to define the duties of the city physician and of the health officer; to protect the public health and to prevent the spread of contagious and infectious diseases," approved by the mayor, April 7, 1904, and ordinance No. 29063, entitled "An ordinance regulating the slaughtering of animals and the sale of carcasses and parts thereof, which are intended for consumption in the city of Portland, providing a penalty for the violation thereof, and repealing all ordinances and parts of ordinances in conflict therewith," passed by the council on June 10, 1914, and all ordinances and parts of ordinances in conflict herewith, be, and the same are hereby, repealed.